The Educational Record

Published Quarterly by

The American Council on Education

Volume 10 April, 1929 No. 2

Editor:
C. R. MANN

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NATIONAL CAPITAL PRESS, INC., WASHINGTON, D. C.

The Meaning of Euthenics*

BLODGETT HALL OF EUTHENICS is the newest symbol of Vassar's possible contribution toward integrated life in America. When the keynotes of an age are dissolution of traditional values and the drive of barbarians toward new syntheses even while they cling to the magic names of an age already gone, an educator's formulation of an ideology will be inevitably partial. But it may serve to release the will which must make the complex of a new civilization. Now at the beginning of 1929 we can see that an American college is not choosing between pure science and applied, between theory and practice, between spiritual and material, the individual and the social, the critical and the creative, the traditional and the contemporary, the contemplative and the active. We can even see that the old terms of debate about what is specially suitable for women are only partially relevant, for the avalanche of today bids fair either to carry away with it the very definitions of human nature as western civilization has made them or to change their places with reference to each other so completely that it amounts to the same thing. The college of today will form its curriculum, choose its personnel and organize its community on the principle that human life must be known and controlled as an organism. This at once precludes shallow thinking in terms of departmental barriers, simple panaceas like normal adjustment or some vague sanctity called The Truth. It assumes the whole human being functioning. For Vassar College this means women of twentieth century America of the comfortable middle class. It means adolescents between the ages of seventeen and twenty-three.

Of the America from which they come we glibly say words: shift from the village to cities, bigger and better cities, change,

* Reprint of an essay published by Vassar College on the dedication of the Minnie Cumnock Blodgett Hall of Euthenics.

speed, ease of communication—"the American continent a few minutes wide"—mass production, engineering experts, competition of industries in a world-wide field, spreading stock ownership, high power salesmanship, assimilation of aliens, break-up of the family, nerves, prosperity, progress. The best thinkers in America are only just beginning to emerge from naively experiencing these into knowledge of what it is they are experiencing and to suspect how thoroughly old values are likely to disappear. The students of Vassar College know them in terms of clothes, jazz, movies, radios, automobiles, country clubs, speak-easies, vague notions of self-expression, moving from house to house—an average of ten years in one place was the record of one group of descendants of D. A. R.'s. They crave speed and are often impatient of long, careful study which will make a piece of literature or an historical pattern theirs not only intellectually but effectively. They tend to see human life in terms of the stereotype offered the average mind by the commercialized press, the movies and the radio. They have the consumer's attitude—they take plenty of comfort for granted, they fear having it disturbed, they expect pleasure without effort, and naturally they want it glamorous. They are confused with a sense of impotence because they do not seem to be functioning in any very significant way. Therefore their behavior is often extravagant and over-assertive; therefore they are perpetually seeking sensations for fear they will miss something. Yet they often long for permanence which they think marriage will bring. They are apt to dodge college responsibilities because "It's all so temporary. What is the use of trying to make relationships here?" They tend to be restive under the four years' detachment from what they call Life. The best of them sense momentous forces at work outside. These have strong, courageous will for life. They are apt to cry out against the protections which keep them from knowing. They do battle with the turmoils of their growing self-consciousness, of their relations with men, of their religious questionings. Many of them satisfy desire for possession by gathering facts and shaping them. But partly as women,

whether naturally or so trained through centuries, partly as adolescents, they mostly need to identify bodies of learning with themselves. Though they respond enthusiastically to new, dramatically opened fields, and sometimes make brilliantly thoughtful, even original studies, they get up little momentum of their own toward detached scholarship. "What is the connection of Shakespeare with having a baby?" one of the best of them said in class one day and so, swiftly, put her finger on a problem of relationship fundamental in a college education which purports to have anything like the searching sincerity which the best of our generation calls for.

The families of the students are not on the whole traditionally conscious in terms of words. Mostly they have little sense of college studies as activities integrated with American life. A college education is a veneer, a way of providing for their daughters for four difficult years, a chance to have them meet pleasant friends, an opportunity for some dimly conceived best which every American wants to give his children and which he expects to buy very much as he buys fine and irrelevant scraps of European paintings or castles. Parents and children have more distinction from actual contacts with affairs than from their schooling. The best of the children have been trained in preparatory schools to handle words as glib formulæ rather than as expressions of experience. One of the most brilliant of them who had talked about Leonardo da Vinci as a star on "the bosom of the evening sky" and who was asked whether she felt "bosom" when she looked at the sky, said, "Why, of course not. But I don't have to, do I? You said my verse was too abstract. I thought of this." Nor are these students naturally skilled in carrying dialectic to terms of behavior. In a recent discussion of an essay in the form of a Socratic dialogue, a class came to the phrase "a firmer grasp of citizenship." They accepted it at once as an important value. The instructor asked how it would work in their lives as citizens of the College. They made sweeping generalizations about students' irresponsible use of the library. They were told to write a paper on the matter,

gathering information from students in their dormitories and anywhere else they could, thinking what made students behave as they were said to do and offering a plan for removing the causes if their examination revealed difficulties. Fully fifty per cent of the class said that they were not interested in the assignment for they had had no trouble with the library and the problem did not touch them; that they would rather write on something larger that appealed to their imaginations more. Many of the others analyzed the difficulty as far as the obvious pressures which might make trouble and then said simply that human nature is just that way—there is nothing more to be said or done. The episode suggests that the college cannot assume a result beyond words unless it consciously plans to get it. Exactly the same situation arose with Juniors and Seniors confronted with the Contemporary Press. Their impulse was at first to try to fit it into the usual pattern of words to be handed out in the classroom and then, when confronted with a demand that they actually learn to use it, quite unaware that their whole college training had supposedly given them tools, to sit down in confused chaos and say, "We can't know, anyway. Why not dismiss the whole matter and live along as we always have?"

Yet when they are graduated, they will go into a wilderness of swiftness and size and the pressure of masses and confused battles for control. They will have to manipulate this wilderness. They will have to become efficiency experts. Sixty per cent of them will marry; twenty per cent of them will teach; the rest will scatter into research, the drama, various forms of social welfare and other work. Suppose they marry. We are living in a country whose machinery is rapidly developing power to earn our living in four hours a day and is even taking the old sunrise-to-sunset tasks of the household out into organized factory units where the new working day, new hygienic skills, new working groups and new eliminations of waste become the rule. Women do not need to know how to weave but which textiles to buy; nor how to can tomatoes but which factory has the best and puts them up in the

cleanest way and under the most reasonable conditions for its workers; nor how to launder, but which city laundry will wash their clothes best, wear them out least and cost least. For the tasks which yet remain within the four walls of the house, women must know which labor-saving machinery to buy and this involves an intricate process of comparison of claims of expert salesmen and of keenness about essentials—it is like a problem of research to buy a refrigerator or an electric stove today. Stuart Chase's *Your Money's Worth* leaves no room for illusion about the intricacies of knowledge women must have who are the main spenders of the family, nor about the difficulties of getting the knowledge. Perhaps the women might well band together in a political movement to force the government to publish the results of investigations made by the Bureau of Weights and Measures about relative merits of products; industries then might take more interest in a consumer's desire for quality. If the household needs servants, the women must understand the claims of labor to human rights as they have developed in the last century. They must understand the principles of nutrition and sanitation, and with new discoveries every year, this often means knowing when to suspend judgment as much as when to take on new dietary plans.

In the bringing up of children, women must know how to use the resources which modern medicine provides and the fragments of light the psychologists have on the control of early impressions of the children. They must have a questioning attitude about experts' stereotypes as severe as about the welter of others which beset them. They must know how to observe their children with shrewd detachment and with a growing sense of values. They must know what sort of school the children need and what the community provides. They are likely to want to organize parents to get better schools, and even to function on the City Board of Education, though for a long time yet the men will at once say that women's work is to look after children and prevent them from doing it through city politics. To provide the children with adequate playgrounds and beauty of home, women will have

to be interested in city planning. To provide any sort of harmony for their children's background and their own lives, they will have to understand their own emotional needs and conflicts and their husbands', including the effects of industrial and other community pressures. They will have to know how to work with their husbands on a basis of shared responsibility. They will have to know how to use the Press as purveyor of refracted news and trends and sources of further information about all these other problems. If they want to keep their sons out of war, they must know about causes of war and about big navies.

If women are to be experts, then, they must be critics. When even the simplest processes involve complex human relationships in an ever widening circle until all immediacy of vision is lost, when none of these are to be taken at their face value, when no one can say to a women absolutely, "This is right to do," women must have expert tools for valuation; perhaps the most fundamental is knowledge of their own stereotypes to start with. They will never be confronted with fixed formulations of knowledge or even with the questions which it would be illuminating to ask, but with problems felt. They will have to understand them in terms not of issues clearly drawn, of logical concepts worked out on the Herbartian theory of knowledge, but of desires and fears, hidden tensions and irritabilities, economic pressure, chaotic evidence. They will have to search to the causes of conflict, probably working with other people and needing to know how to help a group to resolve its conflicts into a consensus. Then they must turn their decision into activity which will in turn create new tensions, new problems which must be resolved, and so on and on. Here are skills which do not come from every kind of training. The college must take its responsibility for finding out those which apply and discarding those which do not. It is all very well to say that America tends to overemphasize efficiency. But the question is whether even with all this emphasis we can adequately turn to human good the stupendous machinery which science has thrust upon us. If we will ask ourselves how clearly we

see our way through this wilderness, we shall see what we are expecting of our women when we turn them out with a critical equipment based on old theories of learning. Vassar College has introduced what it calls "Euthenics" in the hope that it can give its students a more realistic knowledge of their problems of criticism by bringing them face to face with the difference between having theoretical instruments and skills in using them. Obviously such knowledge can emerge only from their needing to use the skills. The central principle of euthenics is therefore translating scientific knowledge into action or making scientific observations from a practical situation in the life of a functioning organism. It is to be hoped that the presence of this idea may make the scholarship of the whole College more productive because it will have stronger roots in felt need for integration.

If this fructifying critical process grows, it will itself produce the more subtle patterns that its enemies are afraid it will prevent or destroy. To be reassured they have only to look at the history of science and art not from the point of view of appreciating perfected wholes or perfected methods but of questioning about how new forms came to fruition. They will behold constant fertilization of generalizations disinterestedly sought, by the impact of new human needs demanding a form. This of course involves the eternal sacrifice of Spring. But art has ever become sterile when it has not been a functional expression of society. We have recently been suffering from such a period. Only now, as America grows more conscious of itself is it reaching down to its own roots. "Pure science" may well learn the danger of the esoteric from the history of either art or religions.

In America today an expert critic will recognize that we are past the pioneer stage and aiming at the control which is usually called civilization and that even our moral need to be healthy and to make large co-operative groups cannot wholly satisfy us. We have to consider what human beings are capable of patterning into their lives in the leisure they can for the first time in large numbers expect to have. The students of Vassar College belong to the part of the nation

which already has it. As fully civilized women they cannot expect completeness from wifehood, motherhood, the kitchen or the school. They must find accompanying modes of being. The urgency becomes increasingly obvious as we see women trying to identify their men with themselves, women holding on to their daughters who have come to college and should be asserting themselves, women in their fatigued middle age rushing from one sensational fad to another, women thinking as drudges. Nor does public service on welfare Boards of Directors or in politics adequately use them. If the women are unmarried teachers, they allow themselves because of their overutilitarianism to stay dry adolescents as there is no need of their doing. The graduate student in a department of Child Study at a great university who said to another, "Why in the world are you reading Dostoevsky? You're getting lots more than you can ever give out when you are teaching children. What's the use? It's a waste," is headed straight for the sterile and immature efficiency which America must outgrow.

Women must love the many-faceted play of life for joy of its colors, from the geological implications of the Grand Canyon to the wind-swayed columbine against gray New England rock, from the New Mexican Indians praying for rain by their Corn Dance and the Kansas farmer with his Protestant faith and his machinery cultivating vast acres of corn to Professor Millikan with his faith in the law of nature, calling America to pure science. In 1925 dwellers in New York faced the total eclipse of the sun according to their knowledge. Some were on their knees praying for their salvation now that the end of the world had come. Many greeted the shadow as it covered the sun, with whistling and tossing their caps in the air. Some saw another shadow, quicker than thought, slip over the snow and the mysterious blue shadows blacken, then the sun perfectly covered and a rose corona strong on one side, and knew their being suddenly made whole with sight and with thought of Einstein. The ones were frightened with primitive ignorance, others were pleasantly excited by a great, dramatic event, a fragment breaking the routine, and some,

by sharp sense impressions which they placed in a whole order made by pure intelligence—partial too, but giving them areas of law out to the edges of the human mind's capacity—knew the ecstasy of being in a universe so beautiful.

Such beauty may come in a moment in a library. One read about an odd body of dreamers with a notion of an ideal community and no knowledge of agriculture, a curious fragment of American tradition—just like America to produce these freaks. Suddenly it slipped into its place in a whole half-century, when men were first confronted with miseries brought by the new machinery which was to have freed them, threw out bold dreams of control and resolved to turn the dreams into action in a country where the Golden Age might at once be realized. Even while this piece in its place gave the satisfaction of a unified pattern, it opened the doors of mystery—strange currents of thought moving across the sea, easily traced to certain economic forces and philosophical trends. But how came it that those forces took shape at just that time and in just those people's lives? It is these mysteries that the historian's imagination is forever delightedly searching.

It is these that the poets forever seek to interpret. With a sensitiveness needing to integrate infinite subtleties of emotion, they thrust down to the deepest conflicts and by balancing them against each other in a controlled form, purify humanity. They have showed us how to use the whole range of passion from Agamemnon to the shepherd Michael, the Karamazov brothers and the nameless Individual struggling with the Masses of the twentieth century. Through form they lift us to face the last bitter hopelessness and to throw out over a chaos of pain a poised, "Now I know what it is to be man." Or in a highly civilized society, their intelligence darts to detached search of egotism and strips off the innermost coverings of complacency and hypocrisy. In *Le Misanthrope* and *The Egoist* it breaks out into brilliant, clear laughter and equally frees the whole being by the very perfection of acceptance. Or Leonardo's lucid graciousness and ruthless scrutiny penetrate the curtain of drabness and

illumine far horizons. Or the clear melodies of Palestrina giving form to the supreme vision of an age, and the intricate fugues woven by Bach reach beyond the harmonies of sense and release compassion.

But for some the already shaped bodies of knowledge and the arts will not be enough. Even the masters will not touch the whole of them. These few will take their tumults and questions and the thrusts of hardly definable consciousness and make the new art of the twentieth century or experiment toward the new generalizations of science. Each of them faced with the limits of the scientific method and of the interpretations of emotion made by historians, poets and philosophers, will have to decide how she can give life to them by her own peculiar knowledge of oneness with the universe. Must she use the Christian mystics' symbol of sacrifice or the eastern conception of Nirvana? Or must she see that the human imagination has made whatever total explanation of the mystery has been offered and that none of the old revelations quite draw in all the experience possible to the twentieth century mind? Will she then be able to wait, to love knowledge of science and poetry until their fruitful impact with her belonging to the community and her bearing children gives the new symbol she needs?

It is this field of appreciation of varied human values far beyond need for survival, of the fine arts and of science and of their tradition, of glad play of mind for the sake of the play which many of our alumnæ feel was opened to them when Vassar College was founded. It is so precious to them and to many of the most distinguished members of the faculty who have labored to open it and to walk there with the students that they cannot imagine any life of wisdom to which it is closed. All honor to them, for wherever they have living vision, our need of them is desperate. But for the sake of the beauty which they love, the College must face the *naiveté* of the students and of the practically minded, awakening society from which they come. Our scholars must face the fact too that the preparation for the College Board examinations has little place for the independent curiosity which is

the very foundation of their ideal. They must use their skilled analysis to define their new function as teachers. They must create a public which will need art and pure science.

Actually Vassar College has never failed altogether to do this. Increasingly it has introduced into its curriculum courses designed to bridge the gap between the world as the layman sees and tries to manipulate it, the world as science shows it to function and the world as the academic theorist presents it. For they are worlds which use terms so different from each other that to many a college graduate they seem to have no relation whatever and during a year of adjustment after her graduation she finds her enjoyable college ideas disappearing, she cherishes a vague, uplifted feeling, a dim challenge to a not very clear best, registers her daughter as soon as she is born, and does what she can to make an orderly life in the layman's terms. But many of the best of the graduates of the college have insisted that the training of the old, classical, liberal arts course did enable them to face the issues they had to meet outside college and give them the poise of deep at homeness in the universe. They must be respected for their lives are their own claim to validity. One can well understand that when the College announced its new policy, they felt much as one feels at the end of *Walküre* when Brünhilde must be put out of heaven to live on earth as a mortal, however heroic the proportions. They have felt that in a way the change was putting them back to the pioneer, not to say patriarchal, values which they had found insufficient and which they had struggled to enlarge.

Nor can the College lightly brush aside their anxiety. For every sentimentalist who can handle things but cannot think is going to try to introduce his specialty. All sorts of vocations are going to be demanded in the name of the principle "Prepare for life" and "Learn to do by doing." Reactionary men wanting naive, comfortable women will rationalize their desire in terms of courses to prepare for sacred home-making. Professors of the new school are as prone to oversimplifications and authoritarian decisions based on too little evidence as the old theorists. It is questionable how long those who

are always looking at end values will let liberal arts and pure sciences exist in the same institution with them. The very courage too of an effort to use scientific knowledge up to the boundaries of our certainty and to observe and analyze new material will mean that the language in which it is described seems flabby and unintelligible to people who are working in fields where issues were long ago defined and there are reasonably clear patterns of theory and history. This increases anxiety because it is difficult to use a critical tool to test solidity of the new material. Questioners will rightly seek evidences of steady intensity of research. The more skilled they themselves are as teachers, the better they will know that it is more arduous to organize a good sinewy course out of such new fields as child study, interior decoration, and the contemporary press than it is one where the history settles the form. They know the danger of filling up with episodic information and fragmentary practical activity unfocussed and unintegrated with the rest of knowledge. They have seen such courses fail to use the students' capacity to think as miserably as the worst of them have failed to use the students' capacity to feel and act.

These are the raw materials which Vassar College faces. The curriculum and the life of the campus have been planned with increasingly clear determination to integrate them. It is easier to have efficient home economics and child study in a separate box and specialized study of languages or economic theory or history in another. Yet it is a commonplace that the whole is different from the sum of its parts. To experience naively from the simplest bodily functions to the most complex interplay of tensions, and to know the experience, and relate it to other experiences—to live as a complete organism—is a vastly more difficult process than gathering bodies of fact and thinking about them with irresponsible detachment. We are naturally awed by the problem. We incline to say that we cannot reconcile our opposing attitudes, that we shall leave that for the student to do—and we have pleasant rationalizations about their duty to think.

Yet an history of Vassar's course of study would show that for many years certain departments have understood the issue and have provided for the full cycle of practice, history and theory which is necessary if women are to function actively as the discriminating and appreciative critics we have defined. At present every department offers courses with all three emphases, sometimes in separate courses, sometimes fused as in critical writing or nutrition, sometimes with new theories emerging as in the study of the New Testament in the light of newer attitudes of social psychology. We have tried to synthesize our departments by classifying them in four groups—the social sciences, the natural sciences, the fine arts, the foreign languages. The students must work in each of these groups but their chief emphasis must be on a program of sequential study in one department with closely related courses in other departments. This gives opportunity for cutting across group or departmental lines. A study of the Renaissance might include history, literature and art; child study with reference to writing for children would include psychology and English; eugenics research would include zoology, supported by chemistry and economics. Each major is planned with carefully proportioned theory, history and practice though here departments differ in emphasis: Some of the social sciences heavily weight the history and some the theory at the expense of the dynamics; the natural sciences have until recently tended to omit the history and practice; modern languages are mainly history and practice; the arts have the clearest sense of balancing all these elements. Their difficulties are in the practical machinery of the relation of the technician to the theorist. They are beginning to see the need of re-evaluating their theories, reorienting their historical scholarship and drawing on the sources of life of the students themselves. They all need the presence of men and women who know the philosophy of their field, the simplicity of their audience and the actual factors involved in translating ideas into energy, professors and assistants who are willing to struggle with complex interrelationships, for it cannot be said too often that having the machinery is different from using it.

In this pattern Blodgett Hall takes its place, Euthenics is the part of the curriculum which is specifically designed to train the student for efficiency in turning the machine age to human use. It is not vaguely spread over the whole of life, for it is limited to the plane of experience and knowledge possible to young women from seventeen to twenty-three. If specialists would think more constantly of this plane, they would not have so much difficulty in defining and synthesizing. They would not so easily fall into the fallacy of knowing that society must advance as a whole and yet supposing that adolescence can grow by being used thoroughly in one way for four years and then thoroughly in another. It is as stupid to say that we shall have our theoretical training, our playing with our minds or loving the process for its own sake in the college years and our applications afterward as it is to say that we shall eat our food during the first twenty years of our lives and take our exercise during the rest. The definition should be made not vertically but horizontally. Within its possible plane, the idea of euthenics will spread in constantly expanding circles.

At present its outward form as it is related to the new building is strictly limited in order that the Faculty may study and define realistically. A program of sequential study in euthenics may be planned in hygiene, nutrition and dietetics, child study, bacteriology and chemistry of food. Some may even make original contributions by a study of the college health records and working out what constitutes a proper working environment for adolescents. These programs are made within the departments of Botany, Chemistry, Physiology and Hygiene, and Psychology, and invariably with strong support from other social sciences which as yet do not offer enough applied courses to make possible a sequential plan within themselves.[1] To feel the vigor here, one has

[1]A typical major in child study in euthenics includes introductory psychology, laboratory psychology, applied psychology, child study and social psychology in the Department of Psychology; the three courses offered in the Department of Child Study; beginning economics, programs of social reorganization and the family in Economics; and in the Department of Physiology, human physiology, child hygiene, principles of public health.

only to hear the students planning their work with the Director of Euthenics.

But this is only a temporary arrangement. Already the euthenics building shelters geography and interior decorating, the one a part of the Department of Geology, the other of Art. Already too the basement is to be used as workshop where the undergraduates shall practice handicrafts as an extra-curricular recreational activity. The very plan of the building calls for an historical museum and a library. The museum[3] is to be not a scrappy collection of irrelevant fragments which made the dust of the old type of museum, but one carefully thought out to illustrate whole civilizations or whole industries or houses or theaters, and the exhibits are to be made by different classes as a part of their work in relevant courses. The library is to have books, maps and diagrams showing the more intimate social aspects of historical development, the more scientific implications of daily living. Both the library and museum will exhibit distinguished loan collections from time to time.

To be used to its full capacity, the building must draw in the larger community, at once to give the College material for its research and to contribute such knowledge as we have. The Nursery School already serves as a tool out on the edge of the Campus. Here for a school day from nine to half-past three about thirty children between two and four come from Poughkeepsie homes. They are quickly taught to put their coats and rubbers in their own lockers downstairs; the doctor-psychiatrist looks them over carefully; they go upstairs to a spacious room flooded with sunshine, a room belonging to a child's world in decoration and size of furniture. They sing and play with each other and privately make marvellous things out of their imaginations. Or they go outdoors into an open playground where sand-piles and ladders and a slide not to mention a piano-box suggest to agile, inquiring minds a thousand kinds of play. They are left to their own devices, and quiet detached adults interfere only to suggest the regular order of physical processes, to get out their materials or to show them that they can meet obstacles and to relieve a

[3]Compare Salmon, L. M.: *An Historical Museum.* 1915.

situation of too great tensity. These adults watch to find out what a child is.

An interested layman visiting will see an ordered routine and dramatic fragments. A little boy looks at his ladder and its supports, and then with beautiful co-ordination climbs and twists over and over. A little girl begs the teacher to watch her swing. A group is planning to punish a meddler. "All the children follow me," suddenly cries a four-year-old boy, and they follow. Why? Another walks up to a little girl who is quietly playing by herself in the sand and takes away her spoon; she is surprised and puzzled, but she does not protest; he walks over to another pile and grabs a yellow ball. "It is *my* ball," he announces with impenetrable finality as he marches off to gaze fascinated at the baby who is having his picture taken and let him look at his ball but not touch it. Clear, fierce possessive ego. Where can education begin and what can it be? "Come on, the boat is going!" shouts Bobby from the piano-box, and John starts to follow, but Martin, his former hero and now just returned from an illness and sulky to find his nose out of joint, refuses to obey Bobby. John runs back to try to persuade him. Martin is obdurate and Bobby firm. "Hurry up! The boat is going!" John longs to go but he can hardly give up Martin. "I'll take the next one," says Martin. "There isn't any next one," says Bobby, and Martin runs down the hill to join him. So early the stupendous power of the imagination which can command the last word! The world rocks.

But the watchers of the school do not stop with such fragments. They follow the child through detail after detail, hour after hour, week after week, month after month, until they begin to perceive the pattern of his impulses, the growing coordination, the irritations that do not disappear. They see them not only in the school, but subtly and inevitably reflecting the relationships of home and the whole society in which it acts. Then they must win the parents to understand and to act with them. This is one of the most difficult parts of all, for to touch the intimate problems which lie

hidden in the family involves not only the most delicate tact, but intimate knowledge of the community, careful planning for regular, clear-sighted intercourse, and infinite patience in following up the first steps—difficult but not impossible where intelligence and intensity of will to know direct the plan. The parents themselves do gradually realize too that here they have at hand the most expert advice that the twentieth century knows how to give and that far from usurping their place in educating their children, the nursery school reveals how they can find out about them, suggests how both mother and father can give them opportunities and enjoy them without the old destructive possession and too prolonged dependence. They learn that there is a child's world which they must respect and not overshadow; sometimes they learn that they themselves have need for fuller, sounder values than they had hitherto sought.

At the same time the Nursery School is a tool of the College for it is the laboratory of the undergraduate course in child study. Students for the first semester observe and report in accurate, detailed accounts on one of six aspects of all the children—their social reactions on the playground and at meal time, their speech, their motor activity, their personal and physical habits, their mental development, their emotional development. During the second semester they will observe all these aspects in one child. They are awkward, impressionistic observers at first, and only slowly learn that it is of no use to say, "The children use all the implements at the table skilfully" when there have not been any knives for them to use; or to say, "I had a feeling that he was angry," remarks which all college teachers will at once recognize as all too characteristic. Slowly it dawns on them what it means to observe objectively complex human material in the very process of growth, to see the differences between people's behavior and stereotyped generalizations about them, to use the process and not expect swift, final answers. But the contrast between their observations at the Nursery School and those of parents whose children are present at once shows

how automatically the material of euthenics limits itself by plane of experience, for the undergraduate has no more interest in children beyond a certain point than she has in detailed changes in Anglo-Saxon verbs.

Vassar has wished to investigate these relationships even farther and, more than that, help to give college graduates the deeper knowledge which they need now as adults actually manipulating them. It has gathered eighty of them with their children in a Summer Institute. It is simple to say that they have come since 1926 and that while the children of two to four went to the Nursery School and those from four to nine to the Progressive School, their parents heard lectures and joined discussions on their own psychological problems, the history and present place of the family, the guidance of children, the development of schools in a changing civilization, problems of an industrialized world, principles of nutrition, and in 1928 problems of religion. Six weeks of rhythm and musical appreciation for the children, free handwork calling for their originality and their skill, of games, of natural puppy-like rest and then more building—boats for the regatta, a house out of the inevitable piano-box, or a cart. Six weeks of driving earnestness for their parents, hours of lectures and intense discussion, for with this precious chance to find out what they must do for their children, how should they miss any of the courses offered or the discussions with teachers of the two schools even if they did have little time to study the books suggested or were too fatigued to follow any very close reasoning in the evening lectures on religion and could not respond to the valiant efforts of the recreational director in the first year? Here were their children in a kind of school that only five out of thirty families in 1927 had had a chance to observe and that only two would find available for their children during the regular school year. They must learn what this new organization of their activities showed their children to be, what they could do to make up for lacks in their own cities; they must discuss what they could do to change the public schools. And every word of a lecture about how they should guide their children might suggest to

them that they had made mistakes that would reach into their children's adulthood. Self would rise to defense and struggle not to listen to the lecturer. Yet they must know. A kind of fierce honesty would break through the protectiveness and dare to face what next to do. Then the urgency to be wise would demand immediate answers: "What shall I teach my child to pray now—now—now? How can I wait to find out the answer in terms of his whole life and mine and my community's? I may be making irrevocable mistakes. I must know."

Quietly a lecturer must resist the temptation to easy answers and hold this new kind of student to seeing and criticizing the situation as a whole, he must help them to find their questions, he must insist on large, close observation. He must score out of his lectures leisurely ramblings, for six weeks is a short time and this is not the ordinary summer school where students plod through a routine of irrelevancies for the sake of some hypothetical better job or possible matrimony. These are professional men and women who must use the knowledge on which the modern world prides itself and the techniques they only just began to glimpse when they were undergraduates. Here are men and women who can give the investigator new material that he must have. The Vassar Institute has only just begun to tap the resources of such a group, to feel its way toward coordinating lectures given by experts in closely related fields, the work of the two schools and the needs of the parents. But it has tapped the sources—it has even brought here as students men who are ready to admit that their functions are more intricate than being business successes. If the vision of what America needs is large enough, and the dangers of pedantry on one side and superficiality on the other are frankly faced, this summer experiment should work with the regular undergraduate college toward an authentic integration significant for our time.

To keep our vision clear, we must relate the strong whole of our tradition to the changing America of today. It was in 1887 that the proud college which should give women as good

an education as men established a department of history and economics and appointed Miss Salmon professor. Her name has only to be mentioned to suggest the whole stream of influence flowing unbroken into the new building opened this year. For through long years she taught her students that history involves the whole lives of people, a concept which is being only now translated by historians of America generally, in the eight volume *History of American Life*, edited by Professors Fox and Schlesinger, and in multitudinous books on every possible aspect of our history which are crowding the publishers' lists. The fearless largeness of knowledge that she taught students to find she knew how to turn into will to be responsible citizens in the body politic. Characteristically when she for the first time in the College organized some independent study in economics, she directed the students to an untried field needing investigation and one in which the facts of their experience would be essential raw materials. The results were first published in 1896 in a little pamphlet analyzing the relation between the industrial age and the problem of domestic servants. When the new President came to the College, she presented him with a meticulous plan for an historical museum, the philosophy of which was based on careful study of museums all over Western Europe and America. Out of years of teaching students historical sources and her insight into historians' needs for understanding the tools of the present, grew the last works she published, her two authoritative volumes, *The Newspaper and History* and *The Newspaper and Authority*. Back of the present large definition of euthenics is her figure. Those who want to understand its implications could not do better than to study these volumes, for they are important illustrations of integrated control of a key institution in the wilderness of the machine age. For two other aspects questioners might study the movement of community theaters and realize that the one in Poughkeepsie started as work under Miss Buck in the English Department of the College and then moved beyond the Campus to play its part in the whole life of the city. Or the Vassar Bank in Arlington which grew out

of Professor Mills' knowledge of economics. The tradition of the College is one of integration.

Outside the College, during those years alumnæ struggling with the same wilderness were parts of swiftly gathering forces of control. Ellen Richards won her right to study chemistry in the Massachusetts Institute of Technology, in the Boston where chemistry necessary for pre-medical work was nowhere accessible to women, got a Women's Laboratory for them, and led the women trying to develop sanitary engineering, scientific nutrition and budgeting. Minnie Cumnock Blodgett was her disciple working for the welfare of children. Katherine Davis struggled with the problems of women in reformatories. Julia Lathrop became the head of the Children's Bureau established by President Taft. The college settlement movement was rising. Women in many cities analyzed the meaning of play and started mothers' clubs to improve schools. Surveys like the famous Pittsburgh Survey of 1910 were revealing the outrageous wastes in our industrial towns. A labor movement was demanding a fair day's pay for a fair day's work. A new school of economists began to insist that their task was not merely to describe but to change society, and a figure like Carleton Parker was called to arbitrate industrial disputes in the lumber industry of the State of Washington. America had come to the end of her frontier and now her thoughtful people demanded that she make her cities livable. Psychology was developing a technique separate from Philosophy. Its concept of rationalization and the increasing respect for science were turning students to apply the scientific method to social institutions. The stream of Pragmatism flowed into John Dewey's philosophy of education and his *Democracy and Education* became the Bible of a generation starting the movement for "progressive education." Young American poets and critics shocked at the misery which lay under the surface of our gilded life, wrote poems and started bold journals calling for social justice. Others, not so much wanting to write social propaganda, but finding European patterns strangely irrelevant to the great, sprawl-

ing nation that was moulding their feelings, and needing to express their particular vision, founded the *Seven Arts* magazine just as the War swept us into its maelstrom. Then they joined the group who had taken over the old *Dial* and who cried out against the betrayal of their generation all over the western world. Young men and women fiercely turned against academic unwillingness to apply knowledge and make it possible to work out a decent society—the old patterns were scorchingly irrelevant. They turned back to Whitman and searched their America freshly as he bade. But they came out with bitterness that he had not known; their criticism lashed our Nordic myth, our complacency, our cruelties, our standardization. The autobiography of a Lewisohn revealed the tragedy of a race in our midst not accepted though its gift were nothing less than insight. Rising movements of negroes warned that there might be a new conflict. Poets turned to local tradition and wrote regional poetry, or they felt the new rhythms of industry and spoke with voices that other young Americans understood. The Little Theater movement threw out its challenge to Broadway and amateur community theaters presaged a possible education of the public to want sincere art. Sherwood Anderson emerging from the masses of the people who were making the middle west, threw against the demand that he be a successful business man his typical workman's warm, bodily need of moulding materials into beautiful shapes and his cry that we need common lives to be understood and written—lives full of blind drives that burst into chaotic gestures, lives made impotent by overindustrialized society. It was the last cry of the village, but in a society patterned by science it frankly faced needs that had been shouted in less individualized forms by Whitman. Now a new generation, vigorous with feeling for the American tradition, accepting the break up of the old European synthesis and the adolescent stage of our own masses freed into leisure, flings out plans for whole beautiful cities possible in the machine age, starts a whole educational movement for adults that it may stir general need for subtler values by helping the

masses of the democracy to face contemporary perplexities, and by reformulating knowledge in terms relevant to today's urgency. They are clear that the scale on which the new order must be built is monumental, but they will have no more of utopias either aristocratic or democratic. They will begin by accepting their human instrument whole—their bodies and all their needs; the interplay of these needs; and belief in their capacity to learn from experience. They are in the mood of the wise Frenchman who advised man to cultivate his own garden.

It is the fashion to be sceptical of the part colleges can take in this growing life. Yet the colleges reach groups whose values will for a long time be imitated and their graduates may become the builders of the new cities. The tradition of Vassar demands that it go out to face the bold vision of this new America. In dedicating Blodgett Hall, the College is saying that it accepts the challenge.

HELEN DRUSILLA LOCKWOOD,
Vassar College.

The Liberal Arts Curriculum of the College of the City of New York

OF THE making of curricula there will be no end. Indeed, periodical revisions are encouraging signs of life. The following account of a new curriculum is offered not in the thought that a perfect plan, useful to all colleges, has been evolved, but rather to illustrate certain principles which may stimulate further thought. The most gratifying aspect of this particular revision was the spirit in which the faculty performed its work. There was no pulling and hauling nor trading by department heads; all agreed upon certain principles and adhered to them when making up the program which logically followed.

In the first place, it was understood that education begins at birth and continues throughout life and all experiences contribute to the educational process of shaping body, mind and spirit. Since each impression counts, whether it be from nature or man, directly or indirectly through speech and print, and informally through life's general experiences or formally in school, the college must determine just how it can take advantage of the influence of other agencies upon the students and perform its own peculiar rôle with greater effect. It builds upon the formal education of the lower schools and adjusts itself to and draws lessons from current life. For its own students the college is the chief guide during the portion of their lives ranging approximately from sixteen or eighteen to twenty or twenty-two years of age.

It was assumed that, for most of its students, the liberal arts college will be the last formal educational agency to influence general development and the college must perform the function of rounding out the mind and character and of focusing the attention upon later life pursuits or professional training. It must give them not only information and inspiration, but also intellectual tools and desirable habits of thought.

The objects of the curriculum maker is to enumerate studies calculated to promote breadth of scholarship and also specific competency. While the mechanism of the curriculum cannot settle all educational difficulties, it can do much to enable the college community to exert its intellectual and spiritual influences effectively. The two objectives of breadth and sharpness seem to be in conflict, but they are really reciprocally helpful if the curriculum is well planned. Many American colleges try to meet the two requirements by insisting on a few prescribed subjects and then demanding distribution to the extent of so many credits through a number of departments, and concentration to another extent in a definite department or division. The plan of a system of majors and minors is usually a failure, due to the fact that courses overlap in content and are often created because of desires of departments or individual professors rather than in response to the requirements of a well-balanced educational scheme. General rules of concentration and distribution have in most colleges led to choices by the students which are almost as planless as those obtained under free election. The College of the City of New York always had high specific entrance requirements, and it also included in its curriculum a large proportion of prescribed subjects. Nevertheless, even there some of the usual evils of planless work in the last two years were beginning to develop.

The liberal arts faculty confers three degrees: Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Social Science. It was agreed that certain studies are essential to supply the tools of the scholar at the college level and to impart general knowledge characteristic of mature cultivation. Courses available for these purposes were prescribed for all students.

It was also agreed that one cannot pursue intelligent, independent work in one of the three main divisions without an adequate background for such work. Evidently those seeking the science degree require more instruction in the natural sciences, mathematics and scientific technique than students seeking to become competent in the arts and social

sciences. In general it may be said that the scientist is interested in understanding facts and principles of the material universe; arts students must be effective in aesthetic appreciation and expression, while those pursuing the social sciences have in view social organization and human behavior. Consequently, each degree requires its own peculiar preparation or background.

Assuming the broad, cultural base and special preparation in one of the three general fields, it is desirable that each student pursue a group of well-selected studies calculated to make him reasonably competent in some particular field of endeavor. The total credits for a liberal degree at the college is one hundred and twenty-eight.

The faculty prescribed the following courses for candidates for all degrees:

	Semester hours	*Credits*
A. *Tools:*		
English, written	8	4
English, spoken (Public Speaking)	8	4
Mathematics, General mathematical analysis, based on minimum entrance requirements in mathematics	6	6
Foreign Language, A foreign language to be adequately mastered, viz: Latin for Arts students, a modern language for Science students and Social Science students	12 to 14	12
B. *General Knowledge, Physical Education and Recreation*		
(*a*) Physical Science—		
(1) A survey course dealing with the material universe, including matter usually found under the headings of Astronomy, Geology, Geography, Physics, Chemistry and Biology	2 lec. 4 lec.	4
(2) A first course in one of three sciences —Biology, Chemistry or Physics	x lec. y rec. z lab.	6
(*b*) Social Science—		
Economics (Principles)	3	3
Government	3	3
History (General World Culture)	6	6
To be given at first as distinct courses with close cooperation between departments with the view to ultimately working out a survey course in social organization.		

	Semester hours	*Credits*
B. *General Knowledge, Physical Education and Recreation*—Continued		
(*c*) Aesthetic studies, or arts—		
(1) Literature (in English)	6	4
(2) Appreciation of Art	2	1
(3) Appreciation of Music	2	1
(*d*) Present requirement in Hygiene	12	4
(*e*) An additional course, summarizing important elements in the present Civilian Drill course to be required of students who do not elect the basic courses in Military Science	6	2
		60

Note: 1. Mastery of a modern language means actual reading, writing and speaking. This achievement shall be tested by a comprehensive examination at the completion of such language course. There shall be a further test of the use of language as a tool during the first term of the Senior year, the object being to ascertain whether the student has retained his ability to read the foreign language.

A standard of equivalent difficulty shall be established by the Department of Classical Languages for ancient languages.

The language requirement rests upon a minimum entrance requirement of three years of one language and two of another; provided that for the Arts course three years of Latin be presented and for the Science and Social Science courses at least one entrance language shall be a modern language. A student who presents less than this minimum in the total of his entrance credits shall make up the requirement as soon as possible.

2. Any student who passes the achievement test in foreign language before completing twelve semester hours of recitation work may be excused from further courses leading to such mastery, but he shall be allowed credits only in proportion to the time of residence work.

3. The Departments of English and Public Speaking may excuse students who are sufficiently proficient in written and in spoken English from taking some courses normally prescribed, but credit shall be allowed only in proportion to the time of residence work.

Before commenting on this prescription it would be well to consider the nature of the high school course upon which it is based. The College entrance requirement is fifteen units, of which the following eleven and a half must be in the designated subjects:

English (four year course)	3	units
Foreign languages: three years of one and two of another	5	units
Mathematics (Elementary and Intermediate Algebra, Plane Geometry)	2½	units
American History	1	unit

Although all the courses implied in this prescription have informational and cultural value in themselves, they are, at the college entrance level, primarily tool subjects. Some grasp and appreciation of English literature has been imparted, but very little, if any, true literary sense has been developed in connection with a foreign tongue. The student is trying to learn other languages, to supplement the mother tongue as a means of receiving and transmitting thoughts and feelings. In college our curriculum requires all students to continue the process of mastery of one modern, foreign language, and those who are candidates for the degree of Bachelor of Arts must continue their work in Latin. The important principle is that of achievement versus passing marks obtained from term to term. Obviously language is studied to obtain a means of communication and also for the appreciation of literature in other tongues than ours. It is my opinion that literary appreciation is impossible without mastery of the language, and of course mastery is essential if the language is to be a tool for scholarly research. Achievement here is easy of measurement. At the College the test will be no mere gesture but a business-like and thorough step in academic administration. We shall continue to withhold half a credit in written and spoken English till graduation, so that any student who falls below standards of achievement set by the heads of the English and the Public Speaking departments respectively cannot be graduated. The prescribed linguistic work of the College, therefore, is planned to complete the training started in the high school for the purpose of giving command over expression. Students may elect additional courses in the languages for their literary or scientific value. All arts students must do so.

The prescribed mathematics course (mathematical analysis) serves the two-fold purpose of rounding out the general grasp of mathematical concepts for the arts and social science students and of surveying and integrating the field for the science students who must go further in pure mathematics and the applications of mathematics to science and technology. Furthermore, it forms a good base for special

studies in statistics, actuarial science and graphic methods for the social science students. The course presents modern mathematics as a unified study with aspects that may be designated as related to calculus, trigonometry, algebra and analytic geometry; it is not a patchwork of selected parts of the traditional subdivisions of mathematics. In a sense, it is related to mathematics as the science survey course is to science. On the whole, the tool subjects of the general prescription were designed to round out and complete practical studies commenced in the lower schools, so as to give tools to the students which can be used effectively in independent, mature, scholarly work.

It was difficult to settle upon the courses constituting a summary of knowledge essential to the liberally educated man. Obviously this group seeks to give an epitome of the race heritage and to contribute to bodily health. Granted some understanding of languages and mathematics, just what shall be included in the general, cultural summary? It is clear that the ingredients and the relative weights of the subjects included will change from age to age. The wealth of material available is so great and time is so precious that one must resort to survey courses.

Of survey courses, that in science gives the greatest promise of success because there is relatively little disagreement among competent scientists concerning facts and principles, and therefore all the science departments cooperate easily in shaping the course. Our course begins with the universe as understood by modern astro-physicists. The place of the solar system in the galaxy is described and modern ideas concerning spiral nebulae and the limits of the cosmos are considered. Then follows a description of the various celestial bodies, the probable origin of the earth, its geological evolution and its present geography. Essential principles of physics and their application are discussed and the first term ends with modern views of the atom. The second term passes on to chemistry and concludes with biology. The last topic is man, which serves as an introduction to social science and psychology.

One science laboratory course is prescribed so that all students, including those in arts and social science, will have some insight into practical, scientific methods. The faculty would have welcomed an outline course in social organization, but it was deemed wise to perfect the science course in content and method of presentation before undertaking the combined course in the social science. However, departmental cooperation to unify the work in history, economics government and sociology and to prevent duplication was agreed upon.

All the prescribed courses in literature, art and music are survey courses. The hygiene courses referred to as "present requirements" are courses in practical gymnasium work, hygiene and sanitation extending through the four terms of the Freshman and Sophomore years, with three periods a week. The additional work of a similar character is prescribed for all Juniors who have not elected basic military science in the first two years.

Our faculty is divided into three sub-faculties or groups of departments in the three general divisions. Each of these sub-faculties recommended the following studies for students seeking their respective degrees. The whole faculty adopted their recommendations as parts of the new curriculum.

SCIENCE

The two sciences from the group Physics, Chemistry, Biology, not already selected for the common base.

	Credits
6 credits each	12
Mathematics	6
Descriptive Geometry	2
Geology and Mineralogy	2
Logic and Scientific Method	2
	24

ARTS

Second language	14
First language; additional	2
A survey course dealing with the development of human thought, especially man's conception of his place in the universe	3
	19

The Arts Sub-faculty may at any future time add other courses to this group up to a total of twenty-four credits.

SOCIAL SCIENCE

	Credits
History (3) or (4) (Contemporary European or American)	3
Economics (Industrial Evolution)	3
A survey course dealing with the development of human thought, especially man's conception of his place in the universe	3
Sociology	3
Education (Contemporary Theory and Practice)	3
	15
Three of the following courses of three credits each	9
History (3) or (4) Government (Comparative Government) Psychology Logic Statistics Anthropological Geography	
	24

It is apparent that only the science division agreed upon a full and fixed group to serve as its preparation for future concentration. No doubt the other two divisions will finally agree upon the best possible arrangement of pre-specialization courses.

Each student, having determined upon his degree courses, will be required to submit to a committee of the appropriate sub-faculty a plan of courses to be elected as his concentration or specialization group, amounting to twenty-four credits and approved as reasonably calculated to give him competence in some particular field of endeavor.

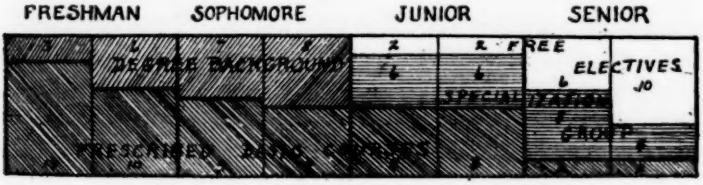
These professional, vocational or concentration "tickets" will be readily agreed upon for students expecting to go into law, medicine, accounting, journalism, teaching and similar standardized callings. The pre-medical student will take more biology, psychology, bacteriology and organic chemistry. The pre-law student will take constitutional law, international law and advanced courses in government and sociology. But a young man may plan to be a musical critic. No doubt he would want technical courses in music, journalistic writing and advanced courses in one or more modern languages. The committee would consult with him and agree upon a reasonable group of studies. The guiding

principle is that he have a definite object, give serious thought in advance to the way he will draw upon college resources, and actually pursue courses calculated to be of real help.

There will be left room for free electives which the student may use as intellectual recreations, additions to his concentration resources, or as new fields of interest. The whole scheme may be summarized as follows:

	Credits
1. Basic courses prescribed for all degrees	60
2. Background related to chosen degree	24
3. Selected specialization group of courses	24
4. Free elective courses	20
Total credits for a degree	128

It is not contemplated that all prescribed courses be completed before the degree background work is begun, though it is expected that all prescribed, tool subjects will be completed before the junior year. The following scheme is one of many possible patterns:



Language courses must be taken so as to continue without a break. All students may postpone the prescribed aesthetic studies till the upper classes; science and arts students may pursue prescribed social science in the junior year and those in arts and social science may in like manner place laboratory science late in the program. Indeed, there are many adjustments which may be made because of differences in the high school preparation and the specialization objective of any candidate for any degree.

In presenting the course of study, the curriculum committee also approved the conduct of honors courses. But it did not mean that students who had secured high grades in the first two years were to be excused from recitations and

allowed to browse at will. On the contrary, the honors subjects were to be those in an approved specialization group taken up by superior students who, having had considerable basic preparation and having been prepared through the completion of an appropriate "background," could pursue their specialties under "honors" conditions. Especially well qualified professors will be designated to meet such students in seminars, lay out special reading and research and encourage independent and original work so far as it is related to the definite objective to which the student is committed.

The way in which general cultivation and specialization are related in this curriculum is interesting. There can be no premature specialization or concentration for which the student is inadequately prepared. Young people just out of high school are as unready for specialization as they are for philosophical generalization. They must first gain control of the scholar's tools, secure general preparation and then concentrate with a definite, guiding objective in mind. Concurrent with these steps is an ever broadening program of information and inspiration concerning the physical universe, the arts and sciences and human evolution. It is a mistake to suppose that superficial work is cultural and mastery is narrowing. Indeed, the best cultivation comes by way of competent grasp of some phase of the world's work which leads to inquiry concerning its relation to other aspects of man's achievements and finally to philosophical generalizations and meditations on relative values. Certainly nothing is good which is not thorough. In this curriculum the broad vistas are kept ever in view while the powers of sure observation and valid thought are being strengthened.

Teachers of survey courses will, while tracing general principles and illuminating great movements, point out places where scholars have made specific researches. Conversely the professor dealing with matters of technique and exact information will refer to their broad applications and their places in the whole field of human thought. Of course modern methods of pedagogy will be employed and advantage

will be taken of the library, the laboratory, social agencies in the community and all the activities of surrounding life. But here we are departing from curriculum building and entering upon matters of classroom methods. The temptation to wander further in a discussion of method, discipline and the influence of personality in teaching is great, but it will be resisted. It is assumed that while passing along the paths marked out by the course of study, teachers will make intelligent use of all devices of instruction and, above all, they will be concerned more with the development of thinking men than of sponges to absorb details of information, more with the ideal of intellectual honesty than a particular mode of scientific technique, more with high endeavor and good works than any particular doctrine, more with human souls than books and equipment. At best the curriculum is but a traveler's guide to a journey during which we hope to liberate free, intellectual spirits prepared to contribute in some effective way to the betterment of the race.

FREDERICK B. ROBINSON,
The College of the City of New York.

Psychological Examination for 1928

WITH the 1928 edition, the American Council on Education Psychological Examination is in its fifth year of use. Each year an increasing number of colleges have given the tests to their students, and a total of 85,040 copies of the current examination have been ordered by 276 colleges.[1]

In accordance with the original plan, several kinds of tests have been tried out and the most successful have been retained from year to year. The five tests in the 1928 edition are the same as those in the 1927 edition and the plan now is to continue with these tests in order that successive editions may be made comparable in score.

The following table shows the thirteen tests which have been tried and the editions in which each was used.

TABLE 1.—*Tests Used in Psychological Examinations*

	1924	1925	1926	1927	1928
Absurdities		x	....	....	....
Analogies (Geometric Designs)		x	....	x	x
Analogies (Words)		x	x	....	....
Artificial Language	x	x	x	x	x
Arithmetic	x	x	x	x	x
Completion	x	x	x	x	x
Estimating	x	....	....	....	....
Grammar	x	....	....	....	....
Number Completion		x	x	....	....
Opposites	x	x	x	x	x
Proverbs	x	....	x	....	....
Reading	x	....	....	....	....
Reasoning	x	....	....	....	....

NORMS FOR THE 1928 EDITION

Two sets of mimeographed norms on the 1928 edition have been distributed to the colleges using the test. The norms given in this report are the same as those in the last report for the separate tests, but the norms for the gross score are based

[1] Figures of February 7, 1929.

on the records of 30,653 students in 112 colleges. These include all reports received before January first and consist of the records from the 112 colleges listed below. Following the list of colleges are the percentile ranks for the scores in the separate tests and for gross scores.

TABLE 2.—*Colleges Reporting Test Scores*

	Number of Freshmen		*Number of Freshmen*
Alabama Polytechnic Institute	490	Goshen College	54
Albion College	256	Graceland College	118
Allegheny College	216	Grinnell College	187
University of Arizona	417	Gustavus Adolphus College	108
Atlanta University	68	Haverford College	83
Aurora College	34	Hood College	175
Baker University	107	Howard College	251
Baltimore College of Commerce	73	Howard University	220
Bates College	209	Iowa Wesleyan College	113
Bay City Junior College	102	Kalamazoo College	130
Baylor College	447	Lawrence College	272
Belhaven College	55	Loyola University	195
Berea College	178	Lynchburg College	82
Birmingham-Southern College	243	Manhattan College	95
Bowdoin College	145	University of Maryland	381
Bradley Institute	285	Maryland State Normal School, Frostburg	85
Brenau College	171	Maryland State Normal School, Towson	367
Bucknell University	323	Maryville College	326
University of Buffalo	281	Marywood College	118
Centenary College of Louisiana	150	Massachusetts Agricultural College	209
Central Y. M. C. A College	269	Miami University	309
University of Chattanooga	111	Michigan State Normal School, Ypsilanti	605
University of Chicago	615	University of Michigan	1404
Clark University	55	Milwaukee Downer College	149
Coe College	309	Montana State College	370
Colgate University	295	Montana University	496
Converse College	124	Morningside College	184
Cornell University	1090	Morton Junior College	136
Creston Junior College	48	University of New Hampshire	368
University of Delaware	212	New Mexico State Teachers College	49
De Pauw University	528	University of North Carolina	616
University of Detroit	183	Northwestern University	952
Drury College	143	Oklahoma State College for Women	361
Dickinson College	166	University of Oregon	796
Elizabethtown College	72	Pacific University	65
College of Emporia	108	Park College	188
Emory University	224	Phillips Academy	204
Eureka College	70	Port Huron Junior College	143
Florida State College for Women	445		
Franklin and Marshall College	242		
Friends University	141		
Georgetown University	100		
University of Georgia	466		
Gettysburg College	182		

TABLE 2.—*Colleges Reporting Test Scores*—Continued

	Number of Freshmen		*Number of Freshmen*
Ripon College	152	Syracuse University	1301
Rosary College	104	Temple University	962
College of St. Elizabeth	63	Texas State College	748
St. Mary's College	132	University of Tulsa	157
St. Xavier College	48	Tusculum College	98
Santa Barbara State Teachers College	167	Vanderbilt University	262
Seton Hill College	64	University of Vermont	378
Shepherd College, State Normal School	96	Virginia Polytechnic Institute	437
University of South Carolina	352	Wabash College	144
Southern Methodist University	413	Webster College	67
Southwestern College, Winfield, Kansas	201	Wells College	74
Southwestern Louisiana Institute	344	Western Maryland College	113
Sweet Briar College	138	Wilson College	136
		Winona State Teachers College	201
		University of Wisconsin	1715
		Yankton College	102
		Y. M. C. A. College	72

TABLE 3

AMERICAN COUNCIL ON EDUCATION

Completion Test, 1928 Edition

Norms based on records of 16,756 students in 66 colleges.
Score equals two times the number of right answers.
Perfect score equals 80.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	49	.001	40	671	.776
2	98	.006	42	596	.814
4	196	.015	44	513	.847
6	248	.028	46	403	.874
8	368	.046	48	415	.899
10	451	.071	50	340	.921
12	541	.100	52	277	.940
14	683	.137	54	205	.954
16	762	.180	56	179	.966
18	781	.226	58	149	.975
20	853	.275	60	101	.983
22	869	.326	62	67	.988
24	919	.379	64	64	.992
26	934	.435	66	46	.995
28	904	.490	68	26	.997
30	942	.545	70	17	.998
32	832	.598	72	8	.999
34	801	.646	74	6	.999
36	752	.693	76	2	.999
38	687	.736	78	1	.999

TABLE 4

AMERICAN COUNCIL ON EDUCATION

***Artificial Language Test*, 1928 Edition**

Norms based on records of 16,756 students in 66 colleges.
Score equals the number of words correctly translated.
Perfect score equals 73.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0–1	167	.005	38–39	549	.755
2–3	190	.016	40–41	527	.787
4–5	184	.027	42–43	457	.817
6–7	265	.040	44–45	397	.842
8–9	360	.059	46–47	403	.866
10–11	498	.084	48–49	364	.889
12–13	616	.118	50–51	278	.908
14–15	796	.160	52–53	263	.924
16–17	829	.208	54–55	240	.939
18–19	851	.258	56–57	182	.952
20–21	933	.317	58–59	122	.961
22–23	929	.367	60–61	124	.968
24–25	925	.423	62–63	115	.975
26–27	951	.479	64–65	79	.981
28–29	1004	.537	66–67	64	.985
30–31	883	.593	68–69	75	.989
32–33	777	.643	70–71	67	.994
34–35	638	.685	72–73	70	.998
36–37	584	.721			

TABLE 5

AMERICAN COUNCIL ON EDUCATION

***Analogies Test*, 1928 Edition**

Norms based on records of 16,980 students in 67 colleges.
Score equals two times the number of right answers.
Perfect score equals 56.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	340	.010	30	1080	.610
2	391	.032	32	1072	.673
4	541	.059	34	1005	.734
6	703	.096	36	1015	.794
8	710	.137	38	920	.851
10	668	.178	40	685	.898
12	643	.216	42	496	.933
14	584	.253	44	362	.958
16	614	.288	46	263	.977
18	550	.322	48	145	.989
20	692	.359	50	77	.995
22	740	.401	52	32	.998
24	797	.446	54	10	.999
26	891	.496	56	2	.999
28	952	.550			

TABLE 6

AMERICAN COUNCIL ON EDUCATION

***Arithmetic Test*, 1928 Edition**

Norms based on records of 16,980 students in 67 colleges.
Score equals four times the number of right answers.
Perfect score equals 80.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	241	.007	44	684	.915
4	726	.036	48	406	.947
8	1065	.088	52	249	.966
12	1542	.165	56	178	.979
16	1768	.263	60	116	.988
20	2014	.374	64	68	.993
24	1988	.492	68	45	.996
28	1842	.605	72	24	.998
32	1665	.708	76	13	.999
36	1340	.796	80	3	.999
40	1003	.865			

TABLE 7

AMERICAN COUNCIL ON EDUCATION

***Opposites Test*, 1928 Edition**

Norms based on records of 16,980 students in 67 colleges.
Score equals three times the number of right answers.
Perfect score equals 81.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0	553	.016	42	847	.685
3	319	.042	45	778	.732
6	490	.066	48	645	.774
9	563	.097	51	671	.813
12	734	.135	54	643	.852
15	844	.181	57	528	.886
18	904	.233	60	453	.915
21	998	.289	63	380	.940
24	1002	.348	66	310	.960
27	1016	.407	69	221	.976
30	985	.466	72	153	.987
33	1029	.525	75	85	.994
36	956	.584	78	46	.998
39	808	.636	81	13	.999

TABLE 8

AMERICAN COUNCIL ON EDUCATION

***Gross Score*, 1928 Edition**

Norms based on records of 30,653 students in 112 colleges.
Perfect score equals 370.

Score	*Frequency*	*Percentile*	*Score*	*Frequency*	*Percentile*
0–9	11	.000	180–189	1469	.778
10–19	60	.001	190–199	1354	.824
20–29	168	.005	200–209	1089	.864
30–39	383	.014	210–219	966	.897
40–49	583	.030	220–229	765	.926
50–59	883	.054	230–239	561	.947
60–69	1103	.086	240–249	462	.964
70–79	1334	.126	250–259	323	.977
80–89	1592	.174	260–269	225	.986
90–99	1739	.228	270–279	139	.992
100–109	1893	.287	280–289	82	.995
110–119	1906	.349	290–299	43	.997
120–129	2014	.413	300–309	31	.998
130–139	2012	.479	310–319	16	.999
140–149	2000	.544	320–329	10	.999
150–159	1935	.608	330–339	6	.999
160–169	1790	.669	340–349	3	.999
170–179	1703	.726			

EQUIVALENT SCORES FOR 1926, 1927, AND 1928 EDITIONS

Colleges using the test often want to compare their successive freshman classes, and we have had several requests for comparable scores on the different editions. For the first two years no gross scores were computed. For the 1926, 1927, and 1928 editions gross scores have been used. On account of the fact that different tests having different time limits were used, these gross scores are not directly comparable, that is, a gross score of 155 on one test does not necessarily correspond to a score of 155 on another edition. It is possible, however, to give equivalent scores on these three editions by using the scores corresponding to each step in the percentile scale. These are the equivalent scores given in Table 9.

For the future it is planned to make the separate tests of each edition directly comparable to the corresponding test of other editions and thus make the raw gross scores equivalent.

TABLE 9.—*Equivalent Scores for* 1926, 1927, 1928 *Editions*

Percentile Rank	*Score in* 1926 *Edition*	*Score in* 1927 *Edition*	*Score in* 1928 *Edition*	*Percentile Rank*	*Score in* 1926 *Edition*	*Score in* 1927 *Edition*	*Score in* 1928 *Edition*
1	43	28	32	40	143	111	123
2	51	35	40	41	144	112	124
3	56	41	45	42	145	113	126
4	61	45	50	43	147	115	128
5	66	49	54	44	148	116	129
6	70	53	57	45	151	117	131
7	73	55	61	46	153	118	132
8	76	58	63	47	154	120	134
9	80	61	66	48	156	121	135
10	82	63	69	49	158	122	137
11	85	65	71	50	160	123	138
12	87	67	74	51	162	125	140
13	90	69	76	52	164	126	141
14	92	72	78	53	165	127	143
15	95	73	80	54	166	128	144
16	97	76	82	55	168	130	146
17	99	77	84	56	170	131	147
18	101	79	86	57	172	132	149
19	104	81	88	58	174	134	151
20	106	83	90	59	175	135	152
21	107	84	92	60	176	136	154
22	109	86	94	61	178	138	155
23	111	87	95	62	180	139	157
24	114	89	97	63	181	140	158
25	115	91	99	64	183	142	160
26	117	92	100	65	185	143	162
27	119	93	102	66	186	145	163
28	121	95	104	67	188	146	165
29	123	96	105	68	190	148	167
30	125	98	107	69	191	149	169
31	127	99	109	70	193	151	170
32	129	100	110	71	195	152	172
33	131	102	112	72	197	154	174
34	132	103	114	73	199	155	176
35	134	104	115	74	201	157	177
36	135	106	117	75	204	158	179
37	137	107	118	76	206	160	181
38	139	108	120	77	208	162	183
39	141	110	121	78	210	164	185

TABLE 9.—*Equivalent Scores for* 1926, 1927, 1928 *Editions*—Continued

Percentile Rank	*Score in* 1926 *Edition*	*Score in* 1927 *Edition*	*Score in* 1928 *Edition*	*Percentile Rank*	*Score in* 1926 *Edition*	*Score in* 1927 *Edition*	*Score in* 1928 *Edition*
79	212	166	188	90	241	191	216
80	214	167	190	91	246	195	219
81	216	169	192	92	251	198	223
82	219	171	194	93	256	202	227
83	221	173	196	94	261	207	231
84	223	176	199	95	267	212	237
85	225	178	201	96	275	218	242
86	227	180	204	97	285	221	249
87	229	183	208	98	298	233	258
88	232	186	210	99	316	247	272
89	236	188	213				

A COMPARISON BETWEEN LARGE AND SMALL COLLEGES

It is possible with the data we have on the 1928 examination to study the relative scores of the students in large and in small colleges. Several arguments are given for the superiority of one to the other, and it is interesting to see if they differ in the test ratings of their freshmen.

Figure I gives the relation between median gross scores and number of tests given to freshmen in one hundred twelve colleges. The very highest ranking freshmen classes are in small schools, but among the larger institutions there are relatively fewer classes having low scores.

Another fact which complicates this analysis is that some of the colleges are public institutions while others are private or endowed. The next section of this report gives a comparison of public and endowed institutions, taking account at the same time of the factor of size.

A COMPARISON OF PUBLIC AND ENDOWED SCHOOLS

A rough comparison of all the public schools and all the endowed schools shows a small difference in favor of the endowed schools. If the comparison is made for schools of

the same size the same difference is found. Figure II shows the relative mean gross scores for the two groups of colleges. The left hand bar in each pair represents the average score of

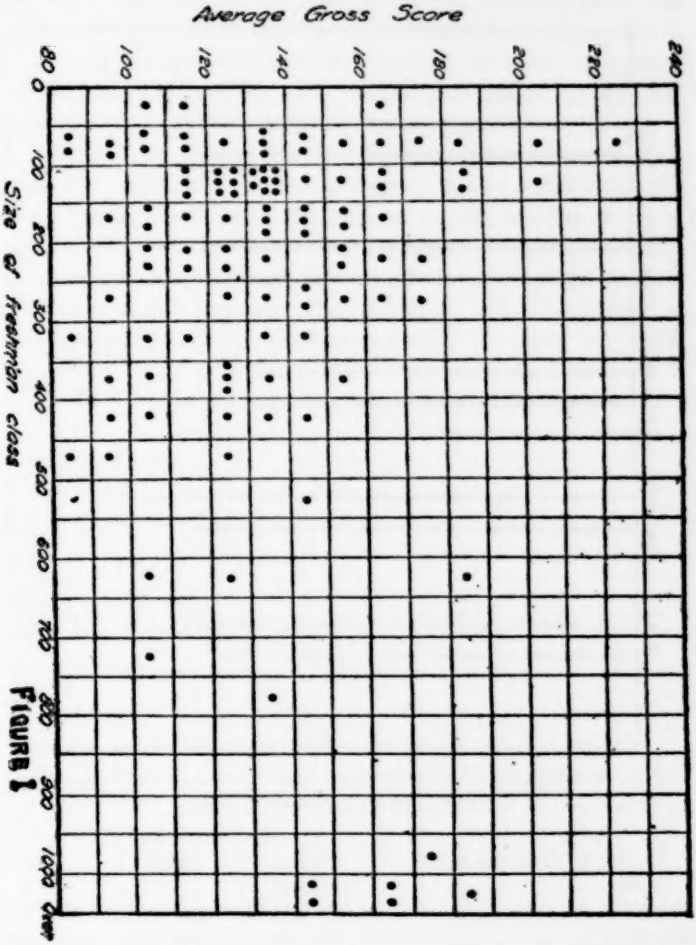


FIGURE I

the freshmen in the private schools, while the right hand bar represents the freshmen in public institutions. The same data are given complete in Table 10.

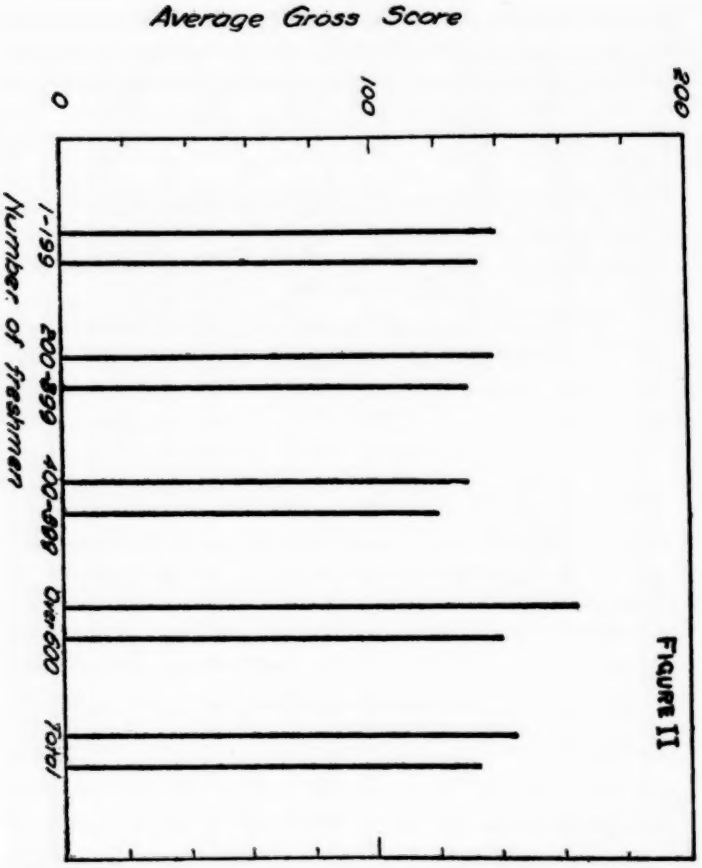


FIGURE II

TABLE 10.—*Relation of Average Gross Score to Size of Freshman Class in Private and Public Schools*

Size of Freshman Class	*Average Gross Score*		
	Private	*Public*	*Total*
1– 99	140.03	.....	.....
100–199	140.25	134.10	139.44
200–399	137.16	130.74	134.19
400–599	129.83	119.62	123.05
More than 600	169.46	139.81	152.80
Total	146.88	132.62	140.65

Results are based on 30,653 students in 112 colleges.

It is interesting to notice that when the schools are separated according to their support (public funds or endowment) the relation between size and psychological test scores is clearer. The very small colleges and the largest have the highest scores. Although for each comparison the students in private schools are slightly superior to those in public schools, it is interesting that the largest public schools are surpassed only by the large endowed schools.

We may then summarize the results of our two comparisons in two conclusions: (1) The freshmen in the largest schools have higher test scores than those in the smaller schools, although the small school's freshmen rank higher than those in institutions of medium size, and the very highest average scores are found in a few small colleges. (2) The freshmen in private schools are slightly superior to those in public schools.

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Selection of College Graduates for Government Service

MANY young men and young women are being chosen each year, on the completion of their college studies, for service in different departments of the government of the United States. Obviously, it is most important that both the government officials, who are charged with the responsibility of making the selections, and the college authorities, who make recommendations, understand what is wanted and speak a common language. This can best be done on the basis of an accurate knowledge of the essential values and requirements of the positions in question.

In some other fields considerable progress in this direction already has been made. During the past ten years, business, industry and the professions have been evolving an effective method of describing expert jobs and superior or talented performance; and also of judging the quality of such performance.

The first step in this procedure consists in compiling detailed records of what men have done who have held successfully the position or positions in question. After analysis and comparison of the records thus obtained, there is worked out a summarized and simplified statement which accurately describes all of the essential activities of the occupation.

In order to be complete, such statements must describe not only *what must be done*, but, also, the *conditions* under which it is to be done, and the *manner of the doing*.

This procedure may be applied to a government position; for example, that of Foreign Service Officer. The first item in the list of the activities of such a person naturally is:

"Protects American citizens."

Experience has shown that such statements are most useful when each one describes some activity that can be observed objectively by other persons. Also, they should contain and

usually begin with a verb that denotes action. This statement complies with these requirements; but, as it stands, it gives no indication of the manner or the conditions under which the work is done. It, therefore, will be worth while to take time to show in some detail how such a single statement may be developed into a form that is accurately descriptive.

The statement "Protects American citizens" does not state the fact that certain knowledge is required. It has been suggested that such deficiences could be supplied by providing a separate list of the prerequisites needed. For example, the Foreign Service Officer must know international law, he must understand American interests, American foreign policies, etc. It is clear that he must have this knowledge; but experience again has shown that it serves the purpose better if all such requirements are embodied in the statement of performance itself by including appropriate phrases. If the above statement is expanded by adding "in accordance with international law," it then defines simultaneously both the action, and a condition upon which success depends. The revised statement would be:

"Protects American citizens in accordance with international law."

Even in this form, the statement is not complete. For success in protecting Americans depends in large measure upon diplomatic skill, and also upon having a legitimate case. Therefore, the statement more nearly records actual conditions if, for the word "protects," the phrase "makes effective representations to the authorities of foreign governments concerning the protection of" is substituted. And further, the protection afforded must properly be limited to "rights and property." Hence a correct and adequate statement would be:

"Makes effective representations to the authorities of foreign governments concerning the protection of American citizens, their rights and their property, in accordance with international law."

As a second illustration of the way in which a simple and incomplete statement may be expanded into a more compre-

hensive description, consider the following, also for a Foreign Service Officer:

"Makes political and economic reports."

This is too large an order. Limitations must be set by denoting the purpose for which the reports are intended and by indicating that only "significant" facts are wanted. Both of these limitations are made clear by rewording the item to read:

"Analyzes and reports on political and economic conditions and trends that are of significance in formulating the policies of the United States."

By following this procedure, and in cooperation with the State Department, a full description of the work of the Foreign Service Officer was produced and printed in the EDUCATIONAL RECORD for October, 1928.

Yet, even in this expanded form, the record was not a complete and accurate picture of the calling of the Foreign Service Officer of the United States. The next step in the process was to send copies of what had been produced in Washington to a large number of Foreign Service Officers in the field, asking them to write to the American Council on Education stating whether or not the description referred to properly and fully describes their activities, and not only specifies what they *do*, but, also, the *conditions* under which they work and the *manner* of performance.

About two hundred and twenty-five replies were received containing several hundred suggestions. Many of these were duplicates, but all of them were carefully classified and tabulated, and the essential features of all the criticisms and suggestions were embodied in a more complete and accurate description, which then became a written "*Record*" of the current "*Usage*" of the calling of the Foreign Service Officer. In this form it is printed below:

FOREIGN SERVICE OFFICER OF THE UNITED STATES

Represents abroad the United States and its citizens.

Generally is stationed in a foreign country where he frequently has to act on his own responsibility and without immediate supervision of home authorities.

I. Creates good-will and common understanding, and, with restrained and critical leadership born of mature experience and profound knowledge of men and affairs, uses these as instruments for enhancing international confidence and cooperation among governments and people.

a. Adapts himself, his conduct, and his mode of living, appropriately to climate and surroundings in the country to which he is assigned.

b. Learns to speak the language of the country in a manner that reveals a background of intelligence and cultivation.

c. Comprehends his own country, and with unremitting endeavor comes to understand deeply the foreign country where he is stationed.

d. Furthers accurate knowledge and friendly understanding of the United States, in foreign countries; and, also, of the foreign countries, in the United States.

II. Promotes and protects the interests of the United States and of its citizens.

a. Makes effective representations to the authorities of foreign governments concerning the protection of American citizens, their rights and their property, in accordance with international law.

b. Advises and assists Americans traveling abroad for business or other purposes with wise counsel and accurate information.

III. Negotiates, with tact, sound judgment, and intimate knowledge of conditions at home and abroad, protocols, conventions, and treaties, especially regarding international intercourse, tariffs, shipping, commerce, preservation of peace, et cetera, in strict conformity to government instructions.

Cooperates and counsels with superior officers and colleagues in government service, on all matters relating to his official duties.

IV. Establishes and effectively utilizes personal contacts in far-sighted ways for the benefit of his government and of American citizens.

V. Analyzes and reports on political and economic conditions and trends of significance to the United States.

a. Analyzes and reports on market conditions; statistics of trade, of finance, of production, of labor, et cetera, in foreign countries in so far as they are significant to the United States and to its people.

b. Analyzes and reports on crops and other agricultural, forest, fishing, and mining resources in so far as they may affect similar American interests.

c. Analyzes and reports on shipping practices, shipping legislation, freights, charters, pools, etc., in so far as they vitally affect any American interests.

d. Reports on all legislation of interest to the United States.

e. Reports on tariffs, both laws and practices.

f. Reports on vital statistics of Americans abroad.

g. Replies to individual trade and other inquiries from American citizens in ways to promote good-will and help both present and future trade relations.

VI. Exercises skill in following prescribed form and routine procedure when possible; and displays discriminating judgment as may be necessary in more complicated situations requiring investigations, careful accumulation of information, or professional understanding of laws, customs, conditions, etc.

a. Issues passports to American citizens, registers citizens, and advises on questions relating to citizenship generally.

b. Issues Bills of Health, makes sanitary reports, and supervises disinfection of merchandise.

c. Certifies invoices of all goods shipped to the United States and reports on undervaluations for protection of revenues.

d. Visas alien passports and issues immigration visas under immigration laws.

e. Enters and clears American ships and air ships, administers relief of seamen, signs on and discharges seamen, settles disputes between masters and seamen, and takes charge of shipwrecked vessels.

f. Assists in prevention of importation of prohibited articles.

g. Administers regulations relating to plant and animal quarantine.

h. Takes custody of and with sagacity administers and settles estates of American citizens and sailors who have died abroad.

i. Handles extradition cases.

j. Witnesses marriages, where at least one of the participants is an American citizen, in accordance with American and local laws.

k. Performs notarial services in accordance with Federal, State and local laws.

VII. Administers an office in a business-like and efficient manner.

a. Gives helpful information to colleagues, and fundamental instruction and guidance to subordinates in assigning probblems, investigations, duties, et cetera.

b. Apportions responsibility and work among personnel, reports on personnel, and maintains morale.

c. Maintains records of business and files of correspondence received and sent.

d. Estimates needs of office and plans budget expenditures for present and future activities.

e. Receives, cares for, and accounts for public property in accordance with government regulations.

f. Collects and properly accounts for fees for services rendered under law.

g. Disburses funds received from the Treasury of the United States for salaries, wages, contingent expenses, makes up required returns and accounts, and remits surplus funds to Treasury.

Other government positions have been studied and the records of the essential activities that pertain to them have been compiled. Some of these are subordinate positions into which young men go immediately after being graduated from college, and others are executive positions of wide responsibility. As an example of the latter, there follows a description of what the President of the United States does. This statement was prepared in a way somewhat similar to that used for the Foreign Service Officer, and it has been subjected to the same kind of a process of criticism, expansion, and revision, in order to make it comprehensive and complete.

THE PRESIDENT OF THE UNITED STATES

Located in White House at Washington, D. C.

Sees a vision of national achievement and develops practical policies for realizing it.

Analyzes social and economic conditions in the light of his vision and reports to Congress such facts and tendencies as seem to him significant both of the present state of the Union and of its future development.

Formulates, for consideration of Congress, measures that seem to him necessary and expedient for realizing his vision of national achievement in ways that are socially, economically and constitutionally sound; presents them so that he secures support for his policies and gets things done.

Confers with members of Congress, representatives of organizations, public officials and private citizens; weighs the evidence and acts always in the interest of national achievement.

Signs bills that are passed by Congress and that seem to him to promote public welfare, sound relationships with the States, and his policies of national achievement.

Vetoes bills that are passed by Congress but that seem to him socially, economically, or constitutionally unsound; submits his reasons therefor in writing to Congress.

Formulates international policies consistent with national development and stimulating to international good will; plans and initiates treaties that are mutually beneficial to all concerned and that also are acceptable to at least two-thirds of the Senate.

Welcomes officially foreign diplomatic representatives and maintains cordial relations with them.

Selects and appoints, by and with the consent of the Senate, ambassadors, ministers and consuls who will creditably represent the United States abroad and sympathetically interpret his international policy.

Selects and appoints, by and with the consent of the Senate, heads of Executive Departments, judges of the Supreme Court and of Federal Courts, members of six Federal Commissions and five Federal Boards, postmasters, marshals, delegates to international conferences, and other officers, as required by law, in a manner that insures national welfare. (About 40,000 appointments.)

Guides the Cabinet and other governmental officials in perfecting policies and in devising ways and means of realizing them in practice.

Uses centralized scientific control as an instrument for obtaining cooperation and efficiency where responsibility is decentralized.

Develops individual initiative and sense of personal responsibility to stimulate wise and loyal action of subordinates under his remote control.

Appraises the work of the Executive Departments as to business efficiency and national service, and secures from Congress approval of an annual budget that distributes estimated income so as to insure teamplay and constructive economy in performance of all legitimate and essential Federal functions.

Modifies administrative organization in the Executive order, as authorized by law, so as to increase efficiency and harmonize Federal activities with his policies.

Commands the armed forces, commissions all officers thereof, and directs military operations, as authorized by law, in accordance with his national and international policies.

Takes care that the laws be faithfully and intelligently executed.

Grants reprieves and pardons for offenses against the laws of the United States in cases where such action seems to promote justice.

Maintains personal touch with the people through formal and informal receptions.

Ponders public opinion, appraises the effect of government action on the citizens, and adjusts his policies to foster proper growth of the people.

Delivers public addresses, confers with press representatives, and in other ways interprets his vision and his policies to the people.

It will be noted that in many of the items in both of these records of usage the qualifying phrases indicate how to evaluate qualitatively the degree of excellence of the performance. For example:

The Foreign Service Officer:

Learns to speak the language in a manner that reveals "a background of intelligence and cultivation" to the people in the country to which he is assigned.

Also, he apportions responsibility and work among personnel (of his office) in a manner that "maintains morale."

To illustrate again from the record of usage of the President of the United States:

He plans and initiates treaties that are "mutually beneficial to all concerned" and that are "acceptable to at least two-thirds of the Senate."

He delivers addresses, etc., in ways that successfully "interpret his vision and his policies."

These qualifying phrases in quotation marks in each instance direct attention to qualities of action that are significant in appraising the degree of excellence of performance. They supply a reliable basis on which to compare the success of one person who occupies the office with the success of some other.

Records of usage, properly drawn in the form herewith presented, contain all the information that is required for a sound basis of selecting men for work. When business and the professions write their records approximately in this form, the data from different occupations are comparable. By their use the record of experience that a given man has had can be compared with the requirements of a new position for which he is being considered; and the probability of his success in the new position may be compared fairly with that of other candidates. The element of guesswork in selecting men, therefore, is enormously reduced.

As another example, consider the first item in the record of usage of the Foreign Service Officer:

"Creates good-will and common understanding, and, with restrained and critical leadership born of mature experience and profound knowledge of men and affairs, uses these as instruments for enhancing international confidence and cooperation among governments and people."

With a statement of this sort as a guide, anyone can readily pick from among his acquaintances the men who would be likely to succeed in meeting these requirements. Anyone could arrange the men whom he knows well, in the order of their probable excellence of performance.

He would then consider the second item in this record of usage:

"Adapts himself, his conduct, and his mode of living, appropriately to climate and surroundings in the country to which he is assigned."

Anyone could pick from among his acquaintances the men who would be likely to succeed, also, in this regard.

And the third item:

"Learns to speak the language of the country in a manner that reveals a background of intelligence and cultivation."

Anyone could pick from acquaintances the men for this. By the same process, item by item throughout the full record of usage, anyone can compare his knowledge of men with the requirements of a situation and choose the one who has the greatest probability of all-around fitness.

An example of a different type may make this idea still clearer.

A mechanical description of the activities of the ranger in the National Park system may be:

"Patrols park trails.
Watches for and reports forest fires, etc."

Compare this with:

"Gets aid without fail to wayfarers who have lost their way on rough mountain trails in a blizzard."

Very little is included in the first statement. A poor imitation would "get by." A great deal is included in the second as to the kinds of knowledge, kinds of skill, kinds of experience, and kinds of habits that are essential to superior conduct. Without further information than is given in this one condition, any old resident in any western town could pick the young men of the town who could be depended on to make good. It is clear, therefore, from this last illustration why records of usage must be more than a description of duties which merely enumerate the mechanics of action without specifying the manner and quality of performance.

When college authorities—personnel officers or others—use records of usage as a basis for vocational guidance or for selection and recommendation of graduates for positions, a new factor enters into the situation. Colleges do not and should not as a rule aim to produce specialists. They do not

fully prepare students for most of the situations in the world's work. Experience and further growth are needed, and often, also, detailed study and special training for specific positions. Records of usage, on the other hand, like that of the Foreign Service Officer, describe activities of those who have become expert after many years of experience. How can these two apparently contradictory conditions be reconciled?

The personnel officer of the college cannot measure "fitness." All that he can hope to appraise is "promise of future fitness." Obviously, his chances of success in making recommendations will be much greater if he knows accurately what must be done in the future in the positions in question; and his chances of success will be still further increased if the college has kept comparable records of performances of students, not only in regard to quality of academic work but also in regard to success of their extra-curriculum activities. If such records of performance of students contain the qualifiying clauses that indicate taste, and temperament, ambition and persistence, and other personal characteristics controlling action, they furnish a real basis for judgment as to promise of future fitness in a particular type of work.

Fortunately, there are experiments in progress to determine how best to keep student records that will be valuable for comparison with the records of usage which describe the requirements of different kinds of work in the world. Full details concerning these experiments were published in the EDUCATIONAL RECORD Supplement for July, 1928.

The chances of success in vocational guidance will be equally increased when student councillors have before them a great variety of records of usage for different kinds of positions and callings on which to base their judgment when giving information and advice to students.

As a further illustration of the method that has been used in constructing records of usage, the following article on the activities of a research scientist in the government service is printed. This article, starting with a description of the activities of a particular man, shows the procedure in detail from the beginning.

ARTHUR L. WILLISTON.

The Activities of a Research Scientist in the Government Service

THERE are a great many research scientists in the service of the United States Government. Their work is of extraordinary importance to the nation. Competent men of proper qualifications and promise of development are sought. The government wishes to know how to select them and scientific men and colleges desire a sound basis upon which to make recommendations.

A study of such positions is in progress to determine the nature of the activities and the requirements for successful performance in them. It will be of interest to have a description of the way in which this study is being carried on.

A position in the Bureau of Standards was chosen. The man who occupied this position generously accepted the suggestion of keeping a daily record of everything that he did and of the manner in which he did things. At noon or at night he would dictate to a dictaphone the story of what he had been doing. This was continued for about thirty days, long enough to complete a cycle of his typical activities. The record when it was transcribed on the typewriter covered about one hundred and forty pages.

There were many duplicate items in the record, but when these were eliminated and when the balance was analyzed and simplified, condensed and rearranged, it appeared in the following form. This is called a "*Record of Performance*" because it refers to the activities of a single individual in a particular position.

PERFORMANCE RECORD OF A RESEARCH SCIENTIST IN THE BUREAU OF STANDARDS

I. Interviewed inventors with impractical ideas; and wrote tactful letters to various persons regarding tests they desired which could not be made.

II. Discussed with associates and others a wide variety of scientific subjects and offered helpful suggestions about them—such as:

a. Integral equations in the theory of optics.
b. The graphic representation of the thermo-dynamic relation of four or five component systems.
c. The clock situation in the laboratory.
d. Methods of accurate measurement of small units of time.
e. Design of a research laboratory in Australia.
f. Seismometers and the relation of earthquake shocks to variations of other quantities.
g. The effect on physical properties produced by forming work-hardening materials.
h. Sperry apparatus for detecting transverse fissures in steel rails.
i. Carbon-resistence strain gauges for measuring resultant forces on airplane stay wires in stunt flying.
j. The status of the rotating beam fatigue machine.
k. Tests of orifice meters; methods of separating experimental deviations caused by different factors; and the application of the least squares method to such problems.
l. Reinforced curved plates tested on edge.
m. The magnetic analysis of turbine runners.
n. Acoustic insulation of motors and counter shafts.
o. Mechanical tests for containers for storage batteries.
p. Phases of the quantum theory.
q. Moisture shrinkage of sand-lime bricks.

III. Participated in conferences on complicated and perplexing technical matters, such as:
a. Accelerometers and their use in connection with truck tests, and discussed the harmonic analysis of space-time records and the infinite determinants, appearing in the theory.
b. The aerodynamic forces on the elevator and the stabilizer surfaces of airplanes.
c. Acceleration of gravity, and the elimination by multiple tests, of flexural correction in the Kater pendulum.
d. Corrosion of air ship material.
e. Light weight aluminum alloys.
f. Deformation due to internal stress, temperature change, and stress due to variable supporting loads—and methods of design for avoiding same—on 200-inch reflector at Mt. Wilson Observatory.
g. Possibilities of reflecting surfaces for same.

IV. Planned and directed tests and checked the results. Analyzed data and suggested direction in which tests should continue.
a. Strain gauge tests of a structural steel dome.
b. The development of a new design of an attachment for the measuring device of proving rings.

c. Tests on proving rings, and schedules for testing under trying conditions.
d. Submarine lifting tackle.
e. Fatigue in alclad metal.
f. Stream-line wire.
g. Corrosion resisting stream-line wire.
h. Thread-locking tests.
i. Welded joints.
j. Tubing of different ratios of thickness to diameter, and of different lengths, loaded in different ways; including duralumin and chrome-molybdenum column tests.

V. Conducted abstract analyses of searching nature.
a. On data regarding tubing tests.
b. The influence of combined axial and transverse loading in relation to pure axial loading.
c. Accelerometers and the influence of inertia vibrations and accidental fluctuations.
d. Aeronautic catapult recoil mechanisms.
e. The influence of small air bubbles on the compressibility of oil.

VI. Gave information and expressed views regarding:
a. Current technical literature.
b. Electric standards.
c. Absolute temperature of the ice point.
d. Terrestrial magnetism.
e. Tensile strength of ice.
f. Air-blast quench for heat-treatment of alloys.
g. Magnetic analyses as a means of detecting flaws in hardened steel balls.

VII. Reanalyzed research problems taking into account new or different factors, such as:
a. The hypothesis of constant solid friction, viz, viscous friction, or both combined.

VIII. Detected important relationships between the theory controlling various fields of experimental research, such as: Accelerometer tests, transient phenomena in electric currents, etc., etc.

IX. Supervised the set-up and conduct of important experiments, for example:
a. Girder tests on a large Emery machine.
b. Investigations to eliminate error and unusual performance of an exceptionally complicated machine.

X. Persisted in matters for which he is responsible and continued to strive for solution of difficult problems.

XI. Computed results of experiments, and conducted very elaborate and complicated mathematical analyses and investigations involving the accurate formation of fundamental

equations to correspond with observed phenomena, and requiring the use of difficult integral equations, etc.

XII. Interpreted the physical meaning of intricate and unusual mathematical equations.

XIII. Kept himself in touch with current technical literature and with the history of scientific research in the field of his specialties and gleaned from these sources suggestions of important relationships as aids in solving his problems.

XIV. Kept himself continuously open-minded and ready to admit himself or his views at fault in the search for new light on scientific matters.

XV. Hunted with skill for some "lead" to help him discover references regarding the history of scientific data and research on particular topics that puzzled him.

XVI. Studied classification of books and the needs of duplicate index to avoid waste of time in searching for them.

XVII. Devoted painstaking effort to the preparation of reports to make them be scientifically accurate, clear, convincing, and interesting.

XVIII. Clarified his mind for oral presentation of scientific subjects which he wished to discuss in public.

XIX. Prepared and selected lantern slides to illustrate particular lines of thought.

XX. Served as officer or committee member of important scientific societies, serving impersonally and advancing the interest of the association and the cause of science.

XXI. Aided in formulating policies of scientific associations and passed on the publication of papers.

XXII. Cooperated with educational institutions and with educators in formulating policies for the training of scientific men.

XXIII. Aided in formulating administrative policies for the efficient conduct of the business of the research laboratory.

XXIV. Used ingenuity and resource to prevent routine procedure from obstructing the work for which he is responsible.

XXV. Cooperated with other organizations, using results of research as an aid to them in perfecting their specifications.

XXVI. Directed the activities of subordinates and aided them in visualizing his ideas and goals of achievement, and inspired them to help him toward the realization of the same.

XXVII. Suggested new ways for his subordinates to master difficulties.

XXVIII. Maintained even temper under annoying circumstances and in face of difficulties caused by lack of cooperation of persons outside his control, but improved matters by skillfully showing, at the right time, the effect of their conduct.

XXIX. Administered a business office and attended to usual office routine.

XXX. Spared neither time nor effort in his enthusiastic search for scientific truth.

In this form the above record gives a clear picture of a particular man at work in a particular position—a "photograph" which his friends would recognize. The important thing in this process of simplification is to find a way to give a clear and correct picture of all the essential facts—a description which tells all one needs to know in order to judge fairly the nature and the quality of performance.

Records of the activities of other research scientists in the government service are being prepared, describing the work of men in the Bureau of Standards, the Department of Commerce, the Department of the Interior, the Department of Agriculture, and the Patent Office. These will be gathered together into groups and combined with one another into records of usage for certain general types of research scientists, or into a more inclusive record of usage for the "Research Scientist in Government Service."

Throughout the procedure accuracy and dependability are secured by having each step, each item, and each phrase carefully checked by a sufficient number of competent observers.

STANDARD TERMS

There is considerable confusion among those who are working in the fields of personnel study and of the analysis of the requirements of work, because they are using the same words with different meanings and do not speak a common language. As a means of clarifying this situation, the American Council on Education has found the following statement describing standard terms most useful:

I. Record of Performance

The term, Record of Performance, applies only to the description of the activities of a ***single individual*** in a ***particular job***, ***position***, or ***situation***.

It is the name for a description of what ***one individual*** did in a ***particular job***, ***position***, or ***situation***.

To make a well-rounded Record of Performance it is necessary to record the activities of the individual on his job over a long enough

period of time to include all of the essential activities that are likely to recur.

A Record of Performance uses the verbs in the past tense.

II. Job Specification

A Job Specification is a composite of the records of performance of *several different* individuals who did the *same* job.

It describes the essential activities of all individuals who do this job. It eliminates from records of performance non-essential personal peculiarities characteristic of any particular individual's work.

It defines the results that any individual must accomplish and the tolerances of acceptable performance on this *particular* job. It defines past, present, and future performance, and uses the verbs in the present tense.

III. Record of Usage

A Record of Usage is the composite of the job specifications of a *group of similar jobs* in a variety of organizations.

It describes the essential activities of a particular type of work in *any* organization. It eliminates from job specifications special requirements characteristic of a particular organization.

It defines the results any individual must accomplish and the tolerances of acceptable performance in a particular type of work in any organization.

The term *Record of Usage* may be used in a broad way.

Thus, it *may* describe *usual* performance in a "*calling*" through which a person or a group of persons may pass with promotions as they gain experience.

The title of the record will usually show whether a particular Record of Usage refers to a given position or to a "*calling*."

ARTHUR L. WILLISTON.

Accredited Higher Institutions

IN 1924 the American Council on Education approved and published two reports of its Committee on Standards, recommending uniform standards as criteria for accrediting colleges, teacher-training institutions and junior colleges. Since then the various regional associations have worked continuously on this problem, have revised their respective lists each year and are gradually working toward uniform standards. Therefore, the list of accredited higher institutions published by the Council in 1928 is incomplete.

The following list in merely a compilation as of April 1, 1929, of the lists of the established accrediting agencies; namely, the Association of American Universities, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the Association of Colleges and Secondary Schools of the Southern States, the North Central Association of Colleges and Secondary Schools and the Northwest Association of Secondary and Higher Schools.

It will be noted that the four regional associations of colleges and secondary schools just mentioned cover among them the entire United States with the exception of New England and the far southwest. Hence institutions in those two regions would not appear in the following list unless they appear on the list of the Association of American Universities, which is a national list.

The American Council on Education has printed as a separate pamphlet its recommendations concerning standards for accrediting higher institutions. Copies of this pamphlet and of the accompanying list will be sent without charge on request addressed to the office of the Council.

Name of institution	*Location*
ALABAMA	
Alabama College for Women	Montevallo
Alabama Polytechnic Institute	Auburn
Birmingham-Southern College	Birmingham
Howard College	Birmingham
Judson College	Marion
Springhill College	Springhill
University of Alabama	University
Woman's College of Alabama	Montgomery
ARIZONA	
University of Arizona	Tucson
ARKANSAS	
Hendrix College	Conway
Ouachita College	Arkadelphia
University of Arkansas	Fayetteville

CALIFORNIA

Name of Institution	*Location*
California Institute of Technology	Pasadena
Claremont Colleges (Pomona; Scripps)	Claremont
College of the Holy Name	Oakland
College of the Pacific	Stockton
Dominican College of San Rafael	San Rafael
Mills College	Oakland
Occidental College	Los Angeles
St. Mary's College	St. Mary's
Stanford University	Stanford University
University of California	Berkeley
University of California	Los Angeles
University of Redlands	Redlands
University of Southern California	Los Angeles
Whittier College	Whittier

COLORADO

Colorado Agricultural College	Fort Collins
Colorado College	Colorado Springs
Colorado School of Mines	Golden
Colorado State Teachers College	Greeley
Loretto Heights College	Denver
University of Colorado	Boulder
University of Denver	Denver
Western State Teachers College	Gunnison

CONNECTICUT

Connecticut College for Women	New London
Trinity College	Hartford
Wesleyan University	Middletown
Yale University	New Haven

DELAWARE

University of Delaware	Newark

DISTRICT OF COLUMBIA

American University	Washington, D. C.
Catholic University of America	Washington, D. C.
George Washington University	Washington, D. C.
Georgetown University	Washington, D. C.
Howard University	Washington, D. C.
Trinity College	Washington, D. C.

FLORIDA

Florida State College for Women	Tallahassee
Rollins College	Winter Park
University of Florida	Gainesville

Name of Institution	*Location*
GEORGIA	
Agnes Scott College	Decatur
Emory University	Atlanta
Georgia School of Technology	Atlanta
Georgia State College for Women	Milledgeville
Mercer University	Macon
Shorter College for Women	Rome
University of Georgia	Athens
Wesleyan College	Macon
HAWAII	
University of Hawaii	Honolulu
IDAHO	
College of Idaho	Caldwell
University of Idaho	Moscow
ILLINOIS	
Armour Institute of Technology	Chicago
Augustana College and Theological Seminary	Rock Island
Bradley Polytechnic Institute	Peoria
Carthage College	Carthage
De Paul University	Chicago
Eureka College	Eureka
Illinois College	Jacksonville
Illinois State Teachers College (Eastern)	Charleston
Illinois State Teachers College (Western)	Macomb
Illinois State Normal University	Normal
Illinois Wesleyan University	Bloomington
Illinois Woman's College	Jacksonville
James Millikin University	Decatur
Knox College	Galesburg
Lake Forest College	Lake Forest
Lewis Institute	Chicago
Loyola University	Chicago
Monmouth College	Monmouth
North Central College	Naperville
Northwestern University	Evanston
Rockford College	Rockford
Rosary College	River Forest
Shurtleff College	Alton
University of Chicago	Chicago
University of Illinois	Urbana
Wheaton College	Wheaton

Name of Institution	*Location*
INDIANA	
Butler University	Indianapolis
De Pauw University	Greencastle
Earlham College	Richmond
Franklin College of Indiana	Franklin
Hanover College	Hanover
Indiana University	Bloomington
Purdue University	Lafayette
Rose Polytechnic Institute	Terra Haute
St. Mary's College	Notre Dame
St. Mary of the Woods College	St. Mary of the Woods
University of Notre Dame du Lac	Notre Dame
Valparaiso University	Valparaiso
Wabash College	Crawfordsville
IOWA	
Coe College	Cedar Rapids
Columbia College of Dubuque	Dubuque
Cornell College	Mt. Vernon
Drake University	Des Moines
Grinnell College	Grinnell
Iowa State College of Agriculture and Mechanic Arts	Ames
Iowa Wesleyan College	Mt. Pleasant
Luther College	Decorah
Morningside College	Sioux City
Mt. St. Joseph College	Dubuque
Parsons College	Fairfield
Penn College	Oskaloosa
St. Ambrose College	Davenport
Simpson College	Indianola
University of Dubuque	Dubuque
University of Iowa	Iowa City
KANSAS	
Baker University	Baldwin
College of Emporia	Emporia
Friends University	Wichita
Kansas State Agricultural College	Manhattan
Kansas State Teachers College of Emporia	Emporia
Municipal University of Wichita	Wichita
Ottawa University	Ottawa
St. Benedict's College	Atchison
St. Mary's College	St. Mary's
Sterling College	Sterling
Southwestern College	Winfield
University of Kansas	Lawrence
Washburn College	Topeka

Name of Institution	*Location*
KENTUCKY	
Berea College	Berea
Centre College of Kentucky	Danville
Georgetown College	Georgetown
Transylvania College	Lexington
University of Kentucky	Lexington
University of Louisville	Louisville
LOUISIANA	
Centenary College of Louisiana	Shreveport
Louisiana College	Pineville
Louisiana Polytechnic Institute	Ruston
Louisiana State University	Baton Rouge
Newcomb College	New Orleans
Southwestern Louisiana Institute	Lafayette
Tulane University of Louisiana	New Orleans
MAINE	
Bates College	Lewiston
Bowdoin College	Brunswick
Colby College	Waterville
University of Maine	Orono
MARYLAND	
College of Notre Dame of Maryland	Baltimore
Goucher College	Baltimore
Hood College	Frederick
Johns Hopkins University	Baltimore
Morgan College	Baltimore
Mt. St. Mary's College	Emmitsburg
St. John's College	Annapolis
St. Joseph's College	Emmitsburg
University of Maryland	College Park
Washington College	Chestertown
Western Maryland College	Westminster
MASSACHUSETTS	
Amherst College	Amherst
Boston College	Boston
Boston University	Boston
Clark University	Worcester
Harvard University	Cambridge
Holy Cross College	Worcester
Massachusetts Agricultural College	Amherst
Massachusetts Institute of Technology	Cambridge
Mt. Holyoke College	South Hadley
Radcliffe College	Cambridge
Simmons College	Boston
Smith College	Northampton

MASSACHUSETTS—continued

Name of Institution	*Location*
Tufts College	Tufts College
Wellesley College	Wellesley
Wheaton College	Norton
Williams College	Williamstown
Worcester Polytechnic Institute	Worcester
MICHIGAN	
Albion College	Albion
Alma College	Alma
Battle Creek College	Battle Creek
College of the City of Detroit	Detroit
Hillsdale College of Michigan	Hillsdale
Hope College	Holland
Kalamazoo College	Kalamazoo
Marygrove College	Detroit
Michigan College of Mining and Technology	Houghton
Michigan State College of Agriculture and Applied Science	East Lansing
Michigan State Normal College	Ypsilanti
Michigan State Normal School (Central)	Mount Pleasant
Michigan State Normal School (Western)	Kalamazoo
Northern State Normal School	Marquette
University of Detroit	Detroit
University of Michigan	Ann Arbor
MINNESOTA	
Carleton College	Northfield
College of St. Catherine	St. Paul
College of St. Teresa	Winona
College of St. Thomas	St. Paul
Concordia College	Moorhead
Gustavus Adolphus College	St. Peter
Hamline University	St. Paul
Macalester College	St. Paul
St. Olaf College	Northfield
University of Minnesota	Minneapolis
MISSISSIPPI	
Blue Mountain College	Blue Mountain
Millsaps College	Jackson
Mississippi Agricultural and Mechanical College	A. and M. College
Mississippi College	Clinton
Mississippi State College for Women	Columbus
Mississippi Woman's College	Hattiesburg
University of Mississippi	University

Name of Institution	*Location*
MISSOURI	
Central College	Fayette
Culver-Stockton College	Canton
Drury College	Springfield
Lindenwood College	St. Charles
Missouri State Teachers College (Central)	Warrensburg
Missouri State Teachers College (Northeast)	Kirksville
Missouri State Teachers College (Northwest)	Maryville
Missouri State Teachers College (Southeast)	Cape Girardeau
Missouri State Teachers College (Southwest)	Springfield
Missouri Valley College	Marshall
Park College	Parkville
St. Louis University	St. Louis
Tarkio College	Tarkio
University of Missouri	Columbia
Washington University	St. Louis
Webster College for Women	Webster Groves
Westminster College	Fulton
William Jewell College	Liberty
MONTANA	
Montana State College	Bozeman
State University of Montana	Missoula
NEBRASKA	
Creighton University	Omaha
Doane College	Crete
Hastings College	Hastings
Nebraska Wesleyan University	Lincoln
University of Nebraska	Lincoln
NEVADA	
University of Nevada	Reno
NEW HAMPSHIRE	
Dartmouth College	Hanover
University of New Hampshire	Durham
NEW JERSEY	
College of St. Elizabeth	Convent Station
Georgian Court College	Lakewood
Princeton University	Princeton
Rutgers University	New Brunswick
Stevens Institute of Technology	Hoboken

NEW MEXICO

Name of Institution	*Location*
New Mexico College of Agriculture and Mechanic Arts	State College
State University of New Mexico	Albuquerque

NEW YORK

Adelphi College of Brooklyn	Brooklyn
Alfred University	Alfred
Barnard College	New York City
Canisius College of Buffalo	Buffalo
Clarkson School of Technology	Potsdam
Colgate University	Hamilton
College of the City of New York	New York City
College of Mt. St. Vincent on the Hudson	New York City
College of New Rochelle	New Rochelle
College of the Sacred Heart	New York City
College of St. Rose	Albany
Columbia University	New York City
Cornell University	Ithaca
D'Youville College	Buffalo
Elmira College	Elmira
Fordham University	Fordham
Hamilton College	Clinton
Hobart College	Geneva
Hunter College of the City of New York	New York City
Keuka College	Keuka Park
Manhattan College	New York City
Marymount College	Tarrytown-on-Hudson
New York University	New York City
Niagara University	Niagara
Polytechnic Institute of Brooklyn	Brooklyn
Rensselaer Polytechnic Institute	Troy
Russell Sage College	Troy
St. Bonaventure's College and Seminary	St. Bonaventure
St. John's College	Brooklyn
St. Joseph's College for Women	Brooklyn
St. Lawrence University	Canton
St. Stephen's College	Annandale
Skidmore College	Saratoga Springs
Syracuse University	Syracuse
Union College	Schenectady
United States Military Academy	West Point
University of Buffalo	Buffalo

NEW YORK—continued

Name of Institution	*Location*
University of Rochester	Rochester
Vassar College	Poughkeepsie
Wells College	Aurora
William Smith College	Geneva

NORTH CAROLINA

Catawba College	Salisbury
Davidson College	Davidson
Duke University	Durham
Elon College	Elon
Greensboro College	Greensboro
Guilford College	Guilford College
Lenoir-Rhyne College	Hickory
Meredith College	Raleigh
North Carolina State College of Agriculture and Engineering	West Raleigh
North Carolina College for Women	Greensboro
Salem College	Winston-Salem
University of North Carolina	Chapel Hill
Wake Forest College	Wake Forest

NORTH DAKOTA

Jamestown College	Jamestown
North Dakota Agricultural College	Agricultural College
University of North Dakota	Grand Forks

OHIO

Antioch College	Yellow Springs
Baldwin Wallace College	Berea
Capital University	Columbus
Case School of Applied Science	Cleveland
College of Wooster	Wooster
Denison University	Granville
Heidelberg College	Tiffin
Hiram College	Hiram
John Carroll University	Cleveland
Kenyon College	Gambier
Lake Erie College	Painesville
Marietta College	Marietta
Miami University	Oxford
Mt. Union College	Alliance
Muskingum College	New Concord
Oberlin College	Oberlin
Ohio State University	Columbus
Ohio University	Athens
Ohio Wesleyan University	Delaware
Otterbein University	Westerville

OHIO—continued

Name of Institution	*Location*
St. Xavier College	Cincinnati
University of Akron	Akron
University of Cincinnati	Cincinnati
University of the City of Toledo	Toledo
University of Dayton	Dayton
Western College for Women	Oxford
Western Reserve University	Cleveland
Wittenberg College	Springfield

OKLAHOMA

Oklahoma Agricultural and Mechanical College	Stillwater
Oklahoma College for Women	Chickasha
Phillips University	Enid
University of Oklahoma	Norman
University of Tulsa	Tulsa

OREGON

Linfield College	McMinville
Oregon State Agricultural College	Corvallis
Reed College	Portland
University of Oregon	Eugene
Willamette University	Salem

PENNSYLVANIA

Albright College	Myerstown
Allegheny College	Meadville
Bryn Mawr College	Bryn Mawr
Bucknell University	Lewisburg
Carnegie Institute of Technology	Pittsburgh
Dickinson College	Carlisle
Drexel Institute	Philadelphia
Franklin and Marshall College	Lancaster
Geneva College	Beaver Falls
Gettysburg College	Gettysburg
Grove City College	Grove City
Haverford College	Haverford
Juniata College	Huntingdon
Immaculata College	Immaculata
Lafayette College	Easton
Lebanon Valley College	Annville
Lehigh University	Bethlehem
Lincoln University	Lincoln University
Marywood College	Scranton
Moravian College and Theological Seminary	Bethlehem

PENNSYLVANIA—continued

Name of Institution	*Location*
Muhlenberg College	Allentown
Pennsylvania College for Women	Pittsburgh
Pennsylvania State College	State College
St. Joseph College	Philadelphia
St. Thomas College	Scranton
St. Vincent College	Beatty
Seton Hill College	Greensburg
Swarthmore College	Swarthmore
Temple University	Philadelphia
Thiel College	Greenville
University of Pennsylvania	Philadelphia
University of Pittsburgh	Pittsburgh
Ursinus College	Collegeville
Villanova College	Villanova
Washington and Jefferson College	Washington
Westminster College	New Wilmington
Wilson College	Chambersburg
RHODE ISLAND	
Brown University	Providence
SOUTH CAROLINA	
Clemson College	Clemson
Coker College	Hartsville
College of Charleston	Charleston
Converse College	Spartanburg
Erskine College	Due West
Furman University	Greenville
Limestone College	Gaffney
Presbyterian College of South Carolina	Clinton
The Citadel	Charleston
University of South Carolina	Columbia
Winthrop College	Rock Hill
Wofford College	Spartanburg
SOUTH DAKOTA	
Dakota Wesleyan University	Mitchell
Huron College	Huron
South Dakota State College of Agriculture and Mechanic Arts	Brookings
South Dakota State School of Mines	Rapid City
University of South Dakota	Vermillion
Yankton College	Yankton
TENNESSEE	
Carson and Newman College	Jefferson City
Maryville College	Maryville
Southwestern	Memphis

TENNESSEE—continued

Name of Institution	*Location*
Tusculum College	Greenville
University of Chattanooga	Chattanooga
University of the South	Sewanee
University of Tennessee	Knoxville
Vanderbilt University	Nashville

TEXAS

Agricultural and Mechanical College of Texas	College Station
Baylor College for Women	Belton
Baylor University	Waco
College of Industrial Arts	Denton
Incarnate Word College	San Antonio
Our Lady of the Lake College	San Antonio
Rice Institute	Houston
Simmons University	Abilene
Southwestern University	Georgetown
Southern Methodist University	Dallas
Texas Christian University	Fort Worth
Texas Technological College	Lubbock
Trinity University	Waxahachie
University of Texas	Austin

UTAH

Brigham Young University	Provo
University of Utah	Salt Lake City
Utah Agricultural College	Logan

VERMONT

Middlebury College	Middlebury
University of Vermont	Burlington

VIRGINIA

Bridgewater College	Bridgewater
College of William and Mary in Virginia	Williamsburg
Emory and Henry College	Emory
Hampden-Sidney College	Hampden-Sidney
Lynchburg College	Lynchburg
Randolph-Macon College for Men	Ashland
Randolph-Macon Woman's College	Lynchburg
Roanoke College	Salem
Sweet Briar College	Sweet Briar
University of Richmond	Richmond
University of Virginia	Charlottesville
Virginia Military Institute	Lexington
Virginia Polytechnic Institute	Blacksburg
Washington and Lee University	Lexington

WASHINGTON

Name of Institution	*Location*
College of Puget Sound	Tacoma
Gonzaga University	Spokane
State College of Washington	Pullman
University of Washington	Seattle
Whitman College	Walla Walla

WEST VIRGINIA

Bethany College	Bethany
Marshall College	Huntington
West Virginia Collegiate Institute	Institute
West Virginia University	Morgantown
West Virginia Wesleyan College	Buckhannon

WISCONSIN

Beloit College	Beloit
Carroll College	Waukesha
Lawrence College	Appleton
Marquette University	Milwaukee
Milwaukee-Downer College	Milwaukee
Ripon College	Ripon
St. Mary's College	Prairie du Chien
University of Wisconsin	Madison
Wisconsin State Teachers College	Oshkosh

WYOMING

University of Wyoming	Laramie

Teachers' Colleges

CALIFORNIA

State Teachers College	San Diego

GEORGIA

Georgia State Teachers College	Athens

IDAHO

State Normal School	Albion
State Normal School	Lewiston

ILLINOIS

Northern Illinois State Teachers' College	De Kalb
Southern Illinois State Normal Univ.	Carbondale

INDIANA

Indiana State Normal School, Eastern Division	Muncie
Indiana State Normal School	Terre Haute

Name of Institution	*Location*
IOWA	
Iowa State Teachers' College	Cedar Falls
KANSAS	
Fort Hayes Normal School	Fort Hayes
State Manual Train. Norm. School	Pittsburgh
Eastern Kentucky State Teachers' College	Richmond
KENTUCKY	
Murray State Teachers College	Murray
Western Kentucky Teachers' College	Bowling Green
LOUISIANA	
Louisiana State Normal College	Natchitoches
MICHIGAN	
Detroit Teachers' College	Detroit
MINNESOTA	
State Teachers' College	Moorhead
State Teachers' College	Winona
St. Cloud State Teachers' College	St. Cloud
MISSOURI	
Harris Teachers' College	St. Louis
Lincoln University	Jefferson City
Teachers' College	Kansas City
MONTANA	
State Normal School	Dillon
NEBRASKA	
State Normal School and Teachers' College	Chadron
State Normal School and Teachers' College	Kearney
State Normal School and Teachers' College	Peru
State Normal School and Teachers' College	Wayne
NEW MEXICO	
New Mexico Normal University	East Las Vegas
State Teachers' College	Silver City
NORTH CAROLINA	
East Carolina Teachers' College	Greenville
NEW YORK	
New York State College for Teachers	Albany

NORTH DAKOTA

Name of Institution	*Location*
North Dakota State Normal School	Dickinson
State Normal and Industrial School	Ellendale
State Normal School	Mayville
State Teachers' College	Valley City
Teachers' College	Minot

OHIO

Cleveland School of Education	Cleveland
State Normal College	Bowling Green
State Normal College	Kent

OKLAHOMA

Central State Teachers' College	Edmond
East Central State Teachers' College	Ada
Northeastern State Teachers' College	Tahlequah
Northwestern State Teachers' College	Alva
Southeastern State Teachers' College	Durant
Southwestern State Teachers' College	Weatherford

OREGON

Southern Oregon Normal School	Ashland
State Normal School	Monmouth

SOUTH DAKOTA

Northern Norm. and Indus. School	Aberdeen
State Normal School	Madison
South Dakota State Normal School	Spearfish

TENNESSEE

East Tennessee State Teachers' College	Johnson City
George Peabody College for Teachers	Nashville
Middle Tennessee State Teachers College	Murfreesboro
West Tennessee State Teachers' College	Memphis

TEXAS

East Texas Teachers' College	Commerce
North Texas Teachers' College	Denton
Sam Houston College	Huntsville
South Texas State Teachers' College	Kingsville
Southwest Texas Teachers' College	San Marcos
Stephen F. Austin State Teachers' College	Nagodoches
West Texas Teachers' College	Canyon

VIRGINIA

Name of Institution	*Location*
State Teachers' College	East Radford
State Teachers' College	Farmville
State Teachers' College	Harrisonburg

WASHINGTON

State Normal School	Bellingham
State Normal School	Cheney
State Normal School	Ellensburg

WEST VIRGINIA

West Virginia State Normal School	Fairmont

WISCONSIN

Wisconsin State Normal School	La Crosse
State Normal School	Superior
Wisconsin State Teachers' College	Milwaukee
Stout Institute	Menomonie

Junior Colleges

ALABAMA

Marion Institute	Marion

ARIZONA

Phoenix Junior College	Phoenix

ARKANSAS

Arkansas Agricultural and Mechanical College	Jonesboro
Arkansas Agricultural and Mechanical College	Monticello
Central Junior College	Conway
Little Rock Junior College	Little Rock
State Agricultural and Mechanical College	Magnolia

COLORADO

Regis College	Denver

GEORGIA

Andrew College	Cuthbert
Junior College of Augusta	Augusta

IDAHO

University of Idaho, Southern Branch	Pocatello

Name of Institution	*Location*
ILLINOIS	
Crane Junior College	Chicago
Elmhurst College	Elmhurst
Frances Shimer School	Mount Carrol
Joliet Junior College	Joliet
La Salle-Peru-Oglesby Junior College	La Salle
Monticello Seminary	Godfrey
Morton Junior College	Cicero
North Park Junior College	Chicago
Y. M. C. A. School of Liberal Arts	Chicago
IOWA	
Graceland College	Lamoni
Mason City Junior College	Mason City
St. Joseph Junior College	Ottumwa
KANSAS	
St. Mary College, The	Leavenworth
KENTUCKY	
Bethel Woman's College	Hopkinsville
MICHIGAN	
Bay City Junior College	Bay City
Emmanuel Missionary College	Berrien Springs
Flint Junior College	Flint
Grand Rapids Junior College	Grand Rapids
Highland Park Junior College	Highland Park
Muskegon Junior College	Muskegon
MINNESOTA	
Hibbing Junior College	Hibbing
Rochester Junior College	Rochester
Virginia Junior College	Virginia
MISSISSIPPI	
Gulf Park College	Gulfport
Hinds County Junior College	Raymond
Whitworth College	Brookhaven
MISSOURI	
Christian College	Columbia
Flat River Junior College	Flat River
Junior College of Kansas City	Kansas City
Kemper Military School	Boonville
The Principia	St. Louis
St. Joseph Junior College	St. Joseph
Stephens Junior College	Columbia
William Woods College	Fulton

MONTANA

Name of Institution	*Location*
Mt. St. Charles College	Helena

NEBRASKA

Union College	College View

NORTH CAROLINA

Mars Hill College	Mars Hill
St. Mary's School	Raleigh

OKLAHOMA

Northeastern Oklahoma Junior College	Miami
Panhandle Agricultural and Mechanical College	Goodwill

TENNESSEE

Hiwassee College	Madisonville
Tennessee Wesleyan College	Athens
Ward Belmont College	Nashville

TEXAS

John Tarleton Agricultural College	Stephenville
Lon Morris College	Jacksonville

VIRGINIA

Averett College	Danville
Sullins College	Bristol
Virginia Intermont College	Bristol

WEST VIRGINIA

Potomac State School	Keyser